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Mr. Karl Hoenke
Chevron Chemical Company
6001 Bollinger Canyon Road
San Ramon, CA 94583

Dear Karl:

Please find enclosed a copy of the *BHC in Chevron Orlando Groundwater: Evidence for Plume Attenuation and Stability*. This document updates the BHC center-of-mass discussion presented in February 2000 (*Plume Stability: A Computational Interpretation Using the Center of Mass Technique*) using the Spring and Fall 2000 monitoring well data. In addition, it quantifies BHC mass reduction in groundwater as an initial step toward ascertaining time to compliance for the natural attenuation remedy.

If you have any questions, please contact me at 303-938-8115 or George Fennemore at 303-442-2549 x116.

Sincerely,

Andy Davis, Ph.D.
Director of Geochemistry

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1.0 Introduction

In Summer 1999, Chevron requested a complete retrospective analysis of soil and groundwater data collected since 1990 at the Orlando site, located in Orange County, Florida (Figure 1-1). In particular, there is interest in understanding the fate and transport of site Constituents of Concern (COCs) since completion of the soil excavation in 1992, and a need to understand the soil/groundwater interactions to allow for eventual closure and disposition of the property.

This document addresses these issues by providing an updated interpretation of the historic data (Geomega 1999) augmented by three additional field investigations in November 1999, April, June, and July 2000, and October 2000. The remaining issues requiring resolution prior to redevelopment of the site are the efficacy of the monitored natural attenuation remedy and the spatial stability of the residual constituents of concern (COCs) at the site.

The body of site-specific information relied upon in preparing this interpretation is summarized in Table 1-1.

This communication focuses on interpretation of the assembled data and analyses and the identification of future activities. The site history and previous data are therefore incorporated largely by reference, but a synopsis is provided in the following section.

1.1 Summary of Site History, Infrastructure, and Remediation

A detailed site history can be found in Geomega 1999. Key aspects of the history pertinent to the present document include:

- Product loading was conducted at a loading dock adjacent to the railroad spur that forms the southern boundary of the site (Figure 1-2).
- Liquid wastes were disposed of in unlined ponds in the northwestern quadrant of the site (Figure 1-2).
- Fourteen (14) monitoring wells (MW-A through MW-P, excluding MW-B and MW-C) were installed in 1990 as part of the Contamination Assessment for the site (Figure 1-2). Samples from these monitoring wells were analyzed for volatile organic compounds (VOCs), chlorinated pesticides, and metals in September 1990. Eight (8) of the wells (MW-A, MW-D, MW-E, MW-F, MW-I, MW-J, MW-M, and MW-P) were sampled and analyzed again in Fall 1991.
- Eight (8) additional monitoring wells (MW-1S, MW-1D, MW-2S, MW-2D, MW-3S, MW-3D, MW-4S, and MW-4D) were installed in Fall 1991 prior to soil excavation activities (Figure 1-2). These monitoring wells were sampled once prior to the excavation.
- In 1992, on-site soils were excavated to meet remedial goals of <50 mg/kg chlordane in surface soils and <100 mg/kg chlordane in subsurface soils.
- Excavation activities caused the removal and/or closure of most of the monitoring wells installed in 1990 and 1991, with the exceptions of MW-A, MW-D, MW-P, MW-1S, MW-1D, MW-2S, MW-2D, MW-4S, and MW-4D. These remaining wells were sampled and analyzed in April 1993.

- Excavation and subsequent activities removed most of the infrastructure and pavement covering >85% of site between 1992 and 1995.
- In 1993, the monitoring network was expanded by adding 17 monitoring wells, including replacements for MW-3S and MW-3D, and new locations MW-5S, MW-5D, MW-6S, MW-6D, MW-7S, MW-7D, MW-8S, MW-8D, MW-9D, MW-10S, MW-10D, MW-11, MW-12, MW-13, and MW-14 (Figure 1-2). All monitoring wells except MW-14 are screened in the surficial aquifer (<30 feet below ground surface). MW-14 is screened in the Floridan aquifer. These monitoring wells were first sampled and analyzed in September 1993. A pump test conducted at MW-10D indicated that the shallow and deep aquifers are not in immediate hydraulic communication.
- In 1995, monitoring well MW-13 was vandalized and rendered inoperable. Site constituents had never been detected at this location so the monitoring well was not replaced.
- MW-15 was constructed in 1996, to provide an additional monitoring location between MW-11 and MW-12.
- Two additional monitoring wells (MW-16S and MW-16D) were installed to replace MW-P in 1997 (Figure 1-2). MW-P was sampled for the final time in March 1997 while these wells were sampled for the first time in October 1997.
- Monitoring well MW-17 was installed in 1998 and sampled for the first time in October 1998.

1.2 Summary of Salient Previous Conclusions

- Historic and current analytical water quality data show that the spatial extent of groundwater COCs has not reached downgradient sentinel wells (i.e., MW-11, MW-12, and MW-15).
- Monitoring wells that currently detect COCs have detected COCs throughout their histories.
- Water level fluctuations exert a significant influence on groundwater pesticide detections.
- The BHC isomer groundwater plume appears to be stable, though attenuation rates are slow.
- There is no cosolvency effect between xylene and lindane contributing to groundwater contamination.
- The 1992 soil removal effectively met its remedial goals.
- BTEX (benzene, toluene, ethylbenzene, and xylene) concentrations are in compliance with the applicable Federal and Florida State regulations.
- Analytical laboratory method detection limit issues involving elevated detection limits and non-reproducible positive results have been observed at peripheral monitoring wells. These analytical artifacts have been discarded from the site interpretation.

2.0 Mass Attenuation Calculations

Accurate assessment of natural attenuation for the Chevron Orlando, Florida site depends on examination of the temporal behavior of the total mass of all BHC isomers in the local groundwater system. This is an appropriate method to examine the efficacy of natural attenuation because:

- fluctuations in water levels make conversion of *concentration* data to *mass* data necessary to interpret long-term temporal trends by removing the variability in the concentration data due to fluctuating volumes of water (Geomega 1999);

- BHC isomerization necessitates that total BHC (ΣBHC) be considered (Geomega 2000) because reduction in the concentration of a specific isomer is not necessarily indicative of attenuation, nor does lack of evident reduction in the concentration of a specific isomer mean that attenuation is not occurring.

Demonstration of the efficacy of natural attenuation as an intermediate step in regulatory compliance is necessary because site conditions will ultimately be required to meet regulatory risk-based objectives. Hence, assessment of the efficacy of natural attenuation is a necessary decision point along the ultimate compliance pathway.

Analyses of attenuation based on site wide BHC concentration data are confounded by fluctuating water levels (Geomega 1999) because as water levels increase, BHC concentrations decrease and vice versa (Figure 2-1). Therefore, a mass-based approach to calculating BHC attenuation in groundwater was developed to obviate this problem. Additionally, to address plume stability, the total mass across the site was integrated to assess BHC behavior.

Attenuation of BHC isomers is most evident in groundwater concentration data obtained from monitoring wells MW-10S and MW-10D where BHC concentrations at these locations have decreased by ~70% since 1993 (Geomega 2000). The apparent attenuation at MW-10 confirms that BHC concentrations are declining through natural processes.

2.1 Total Mass Calculations

ΣBHC masses were calculated for the site groundwater system by converting concentration data to mass at each sampling location, and interpolating point-wise data to calculate the mass in the entire system on an annual basis.

2.1.1 Concentration to Mass Calculations

Conversion from concentration to mass of ΣBHC was performed using the following set of calculations:

<u>**Step 1.**</u> Summation of BHC concentrations (ug/l) on an individual well basis and individual sampling event basis (Table 2-1), i.e.,

ΣBHC in MW-10S from 4/2000 = α-BHC in MW-10S from 4/2000
+ β-BHC in MW-10S from 4/2000
+ γ-BHC in MW-10S from 4/2000
+ δ-BHC in MW-10S from 4/2000

Monitoring wells MW-16S and MW-16D replaced monitoring well MW-P in 1997. Data from these wells were interpreted as characteristic of the common location. Therefore, ΣBHC concentrations at this location through March 1997 are associated with MW-P monitoring results. Beginning in October 1997, ΣBHC concentrations are associated with MW-16S and MW-16D monitoring results.

Step 2. Depth weighted-averaging of ΣBHC concentrations (ug/l) in shallow and deep well pairs to obtain a representative concentration for the entire water column (Table 2-2; Figure 2-2), i.e.

$$\Sigma BHC_{MW-10} = \frac{L_{MW-10S}\Sigma BHC_{MW-10S} + L_{MW-10D}\Sigma BHC_{MW-10D}}{L_{MW-10S} + L_{MW-10D}}$$

$$L_{MW-10} = L_{MW-10S} + L_{MW-10D}$$

Depth-weighted averaging begins to account for the total mass in the system by recognizing that a consistent mass of dissolved BHC could manifest itself as higher concentrations at lower water levels and lower concentrations at high water levels.

Step 3. The Spring and Fall depth weighted-average results are averaged together (Table 2-3) , i.e.

$$\Sigma BHC^{1999}_{MW-10} = \frac{L^{Spring1999}_{MW-10}\Sigma BHC^{Spring1999}_{MW-10} + L^{Fall1999}_{MW-10}\Sigma BHC^{Fall1999}_{MW-10}}{L^{Spring1999}_{MW-10} + L^{Fall1999}_{MW-10}}$$

Annual averaging accounts for sorption/desorption reactions that take place in the system during the annual groundwater elevation cycle.

Step 4. Interpolation between discrete sampling points to define mass across the entire system was conducted using the kriging package in Surfer to interpolate values between data measurement locations. The interpolations assign values to locations based on the spatial characteristics of the measured data set and proximity to sample locations.

Kriging parameters including variogram range, sill, and nugget, interpolation search radius, and number of data points used per interpolation were calculated for input data. Use of the automated kriging parameters resulted in interpolations that matched the data at sample locations.

Step 5. The kriged data interpolation was used to determine the ΣBHC concentration in each 50-foot by 50-foot segment of the site, extending from the southwestern corner of the site to Lake Fairview in the northeast (Figure 1-2).

These concentration were converted to a mass by

$$M = C \bullet L \bullet A \bullet \phi$$

where

M is the calculated mass,
C is the ΣBHC concentration,
L is the height of the water table above a reference depth,
A is the area associated with each 50'x50' segment, and
ϕ is the porosity of the soil.

For the Orlando site, L was taken to be the height of the water level above the basal confining layer, located approximately 30 feet below the ground surface. A porosity value (ϕ) of 0.585 was used as this was the porosity value reported for site soils (Brown & Caldwell 1992). While the selected porosity is inconsistent with typical values for this type of sandy material (e.g., 0.3; *Quantitative Hydrogeology*, G. de Marsily, 1986), a lower porosity would reduce the absolute mass but would not influence the overall trend configuration.

The total mass for the entire system was calculated by summing the mass in the 50'x50' segments (Table 2-4).

2.1.2 Results

Total mass concentrations plotted versus time from 1993 to the present (Figure 2-3), demonstrated a consistent reduction in total mass throughout that time period with the exception of 1997 when the total mass increased compared to 1996, and 2000 when total mass decreased only slightly compared to 1999. The 1997 and 2000 trend anomalies were consistent with water level anomalies, when there is little difference between the Spring and Fall sampling water levels (Figure 2-1).

Between 1993 and the present, the trend shows a 10% annual reduction (Figure 2-3) in overall BHC mass in the holistic groundwater system. However, since the ROD was issued in May 1996, the aggregate rate of annual decline has approximated 17% (Figure 2-3). In addition, aside from the 1997 and 2000 trend anomalies (24% increase and 1% reduction, respectively), an average 17% annual mass reduction was observed during the other years.

2.2 Spatial Distribution of BHC in Groundwater

A brief review of the spatiality of site measurements lends perspective to the holistic attenuation assessment.

Following the Removal Action, a new system of monitoring wells was established (Section 1.2; Figure 1-2) that have been sampled 16 times since 1993. Using these data, ΣBHC concentrations in 1993 through 2000 were contoured (Figures 2-4 through 2-10).

When viewed in series, the contour plots illustrate mass reduction beginning in the vicinity of MW-10 and extending toward the remainder of the site (Figure 2-4 versus Figure 2-10). This temporal evolution supports holistic attenuation of BHC's but shows that attenuation has been more pronounced on the southern portion of the site.

3.0 Summary

Total BHC mass in the groundwater system decreased by an average 10% per annum between 1993 and 2000 and by approximately 17% from 1997 to present. Annual reduction occurred at higher rates with the exceptions of 1997 and 2000 when water level influences over-rode the general decreasing trend. Reductions in dissolved ΣBHC concentrations appear to be originate in the vicinity of MW-10 and appear to have extended toward other areas of the site recently (Figures 2-4 through 2-10).

Tables

Table 1-1. Referenced Reports

Contamination Assessment Report, Brown & Caldwell – December 1990;

Removal Action Plan, Brown & Caldwell – July 1991;

Removal Action Report, Brown & Caldwell – December 1992;

Remedial Investigation, TASK Environmental, PTI – November 1994;

Removal Action Report Amendment, TASK Environmental – July 1994;

Comprehensive Data Review & Hydrogeochemical Conceptualization of the Chevron Orlando Site, Geomega – September 1999;

A Retrospective Analysis of the Post-Remedial Soil Condition at the Chevron Orlando Site, Geomega – January 2000;

Plume Stability: A Computational Interpretation Using the Center of Mass Technique, Geomega – February 2000;

An Evaluation of the Effect of Xylene on Putative Lindane Cosolvency in Chevron Orlando, Florida Site Groundwater , Geomega – February 2000;

Fall 1999 Groundwater Sampling Report, Chevron Orlando, Florida Site, Geomega – March 2000;

Lithologic Corroboration at the Orlando Site Using Cone-Penetrometry, Geomega – August 2000;

Spring 2000 Groundwater Sampling Report, Chevron Orlando, Florida Site, Geomega – September 2000;

Shallow Soil Chlordane Data, Chevron Orlando, Florida Site (memo), Geomega – October, 2000.

Site Activity Reports, TASK Environmental – 1998 and 2000.

Table 2-1. ΣBHC and Saturated Thickness for Each Sampling Event

Well ID		4/93	9/93	4/95	10/95	2/96	5/96	9/96	12/96	3/97	10/97	3/98	10/98	3/99	11/99	4/00	10/00
MW-1D	ΣBHC	5.56	6.83	2.93	2.95	3.61	3.61	3.04	1.56	1.18	5.03	0.10	2.55	3.70	3.20	4.20	8.99
	Thickness	12.50	12.50	12.50	12.50	12.50	12.50	12.50	12.50	12.50	12.50	12.50	12.50	12.50	12.50	12.50	12.50
MW-1S	ΣBHC	4.62	14.73	6.13	6.32	7.33	6.53	5.99	3.18	4.43	16.03	0.10	8.03	11.53	1.62	5.63	7.19
	Thickness	7.50	7.44	6.73	8.75	7.05	6.70	7.50	6.74	6.27	6.63	8.28	7.46	6.05	7.88	6.78	6.72
MW-2D	ΣBHC	0.10	1.90	0.73	0.10	0.56	0.44	0.33	0.10	0.10	0.28	0.67	0.27	0.70	3.05	0.90	0.69
	Thickness	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
MW-2S	ΣBHC	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.16	0.10	0.13	0.10	0.10	0.10	0.09
	Thickness	10.36	9.63	9.45	13.41	10.00	9.45	10.83	9.81	9.02	9.40	11.84	10.60	8.63	11.40	9.05	9.17
MW-3D	ΣBHC	NA	0.10	0.13	0.23	0.14	0.10	0.10	0.10	0.10	0.22	0.20	0.38	0.50	0.30	1.18	0.26
	Thickness	NA	12.50	12.50	12.50	12.50	12.50	12.50	12.50	12.50	12.50	12.50	12.50	12.50	12.50	12.50	12.50
MW-3S	ΣBHC	NA	4.89	3.78	0.58	1.26	2.14	1.05	0.50	0.50	2.01	1.97	1.41	3.79	0.41	1.25	0.58
	Thickness	NA	10.39	10.40	14.95	10.86	10.29	12.13	10.75	9.57	10.04	13.04	11.67	9.37	12.50	9.56	9.52
MW-4D	ΣBHC	24.13	21.83	18.03	15.53	5.33	13.03	15.03	10.95	4.93	16.03	0.18	15.93	15.83	33.55	11.13	17.35
	Thickness	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
MW-4S	ΣBHC	12.03	27.73	59.20	12.80	31.55	56.03	36.00	26.35	30.80	71.00	1.00	44.50	49.85	13.70	42.05	52.80
	Thickness	10.01	9.41	9.06	12.67	9.50	9.90	10.28	9.28	8.57	8.89	11.60	10.21	8.23	10.86	8.23	8.70
MW-5D	ΣBHC	NA	0.10	0.28	0.10	0.10	0.10	0.14	0.19	0.10	0.30	0.29	NA	0.55	0.10	0.49	0.09
	Thickness	NA	12.25	12.25	12.25	12.25	12.25	12.25	12.25	12.25	12.25	12.25	NA	12.25	12.25	12.25	12.25
MW-5S	ΣBHC	NA	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	NA	0.10	0.10	0.10	0.09
	Thickness	NA	6.44	6.11	8.45	8.03	6.13	6.94	6.24	5.79	5.93	7.85	NA	5.52	7.31	5.97	5.97
MW-6D	ΣBHC	NA	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	NA	0.10	NA	0.19	0.09
	Thickness	NA	12.50	12.50	12.50	12.50	12.50	12.50	12.50	12.50	12.50	12.50	NA	12.50	NA	12.50	12.50
MW-6S	ΣBHC	NA	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	NA	0.10	NA	0.10	0.09
	Thickness	NA	7.69	8.40	10.68	8.51	7.73	8.22	7.58	7.24	7.28	8.53	NA	6.94	NA	7.17	7.13
MW-7D	ΣBHC	NA	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.12	0.10	NA	0.23	NA	0.10	NA
	Thickness	NA	12.50	12.50	12.50	12.50	12.50	12.50	12.50	12.50	12.50	12.50	NA	12.50	NA	12.50	NA
MW-7S	ΣBHC	NA	0.10	0.13	0.13	0.10	0.13	0.13	0.10	0.13	0.14	0.10	NA	0.10	NA	0.10	NA
	Thickness	NA	12.74	12.26	16.33	13.28	12.43	14.28	10.09	11.87	12.41	14.73	NA	11.88	NA	12.00	NA
MW-8D	ΣBHC	NA	0.10	0.24	0.16	0.10	0.18	0.16	0.10	0.10	0.29	0.44	0.55	0.40	0.16	0.27	0.09
	Thickness	NA	12.25	12.25	12.25	12.25	12.25	12.25	12.25	12.25	12.25	12.25	12.25	12.25	12.25	12.25	12.25
MW-8S	ΣBHC	NA	0.87	0.21	0.10	0.10	0.13	0.10	0.10	0.10	0.12	0.08	0.10	0.16	0.10	0.17	0.32
	Thickness	NA	10.99	10.56	15.29	11.15	10.95	11.42	11.01	10.07	10.60	13.45	12.22	9.99	12.92	10.10	10.39

NA= not analyzed

Table 2-1 continued. ΣBHC and Saturated Thickness for Each Sampling Event

Well ID		4/93	9/93	4/95	10/95	2/96	5/96	9/96	12/96	3/97	10/97	3/98	10/98	3/99	11/99	4/00	10/00
MW-9D	ΣBHC	NA	1.01	1.35	2.47	2.47	4.90	5.69	5.17	6.75	4.73	4.39	5.73	3.02	3.04	2.36	1.22
	Thickness	NA	22.28	22.03	25.85	22.55	22.40	23.48	22.23	21.36	22.01	24.45	23.47	21.30	23.96	21.61	21.76
MW-10D	ΣBHC	NA	20.25	6.61	2.72	1.55	1.37	0.20	0.10	0.10	0.33	0.26	0.84	0.57	0.71	0.10	0.96
	Thickness	NA	11.50	11.50	11.50	11.50	11.50	11.50	11.50	11.50	11.50	11.50	11.50	11.50	11.50	11.50	11.50
MW-10S	ΣBHC	NA	110.20	68.20	43.58	35.75	61.40	18.50	40.40	67.40	12.30	27.70	38.80	36.50	27.20	23.90	28.30
	Thickness	NA	8.46	8.08	11.83	8.55	8.45	9.34	8.20	7.49	8.07	10.41	9.44	7.29	9.96	7.71	8.02
MW-11	ΣBHC	NA	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	NA	0.10	NA	0.10	NA
	Thickness	NA	12.78	12.41	14.17	12.84	12.72	13.58	12.75	12.26	12.55	13.84	NA	11.81	NA	12.25	NA
MW-12	ΣBHC	NA	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.18	0.09
	Thickness	NA	12.63	12.40	14.27	12.66	12.48	13.47	12.40	12.00	12.17	13.79	12.85	11.50	13.29	12.03	12.00
MW-15	ΣBHC	NA	NA	NA	NA	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.09
	Thickness	NA	NA	NA	NA	11.12	10.40	11.33	12.50	10.00	10.13	11.85	10.87	9.74	11.25	10.03	9.99
MW-16D	ΣBHC	NA	NA	NA	NA	NA	NA	NA	NA	NA	16.50	36.10	38.30	23.00	5.17	6.87	0.37
	Thickness	NA	NA	NA	NA	NA	NA	NA	NA	NA	11.00	11.00	11.00	11.00	11.00	11.00	11.00
MW-16S	ΣBHC	NA	NA	NA	NA	NA	NA	NA	NA	NA	38.00	10.52	13.40	14.90	3.74	25.20	65.70
	Thickness	NA	NA	NA	NA	NA	NA	NA	NA	NA	7.42	9.20	8.20	6.85	8.60	7.31	7.44
MW-17	ΣBHC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	27.33	23.80	3.93	22.85	20.80
	Thickness	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	10.51	8.45	11.08	8.83	9.08
MW-A	ΣBHC	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	NA	NA	NA	NA	NA	NA
	Thickness	8.79	8.26	7.87	10.40	8.20	8.23	9.00	8.00	7.31	7.90	NA	NA	NA	NA	NA	NA
MW-D	ΣBHC	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	NA	0.16	NA	0.10	NA
	Thickness	11.76	11.20	10.85	13.99	11.42	11.18	12.65	11.35	10.22	8.89	13.25	NA	10.36	NA	10.36	NA
MW-P	ΣBHC	24.60	33.60	42.30	20.25	16.80	50.00	18.15	28.70	71.00	NA	NA	NA	NA	NA	NA	NA
	Thickness	12.43	11.98	11.60	13.76	11.70	11.73	12.37	11.69	11.23	NA	NA	NA	NA	NA	NA	NA

NA= not analyzed

Table 2-2. Shallow and Deep Composite per Sampling Event

Well		4/93	9/93	4/95	10/95	2/96	5/96	9/96	12/96	3/97	10/97	3/98	10/98	3/99	11/99	4/00	10/00
MW-1	ΣBHC	5.20	9.77	4.04	4.34	4.95	4.62	4.14	2.13	2.26	8.84	0.10	4.60	6.25	2.58	4.70	8.36
	Total Thickness	20	19.94	19.23	21.25	19.55	19.2	20	19.24	18.77	19.13	20.78	19.96	18.55	20.38	19.28	19.22
MW-2	ΣBHC	0.10	1.10	0.45	0.10	0.35	0.29	0.22	0.10	0.10	0.23	0.39	0.20	0.45	1.61	0.56	0.43
	Total Thickness	22.36	21.63	21.45	25.41	22	21.45	22.83	21.81	21.02	21.4	23.84	22.6	20.63	23.4	21.05	21.17
MW-3	ΣBHC	NA	2.27	1.78	0.42	0.66	1.02	0.57	0.28	0.27	1.02	1.10	0.88	1.91	0.36	1.21	0.40
	Total Thickness	NA	22.89	22.9	27.45	23.36	22.79	24.63	23.25	22.07	22.54	25.54	24.17	21.87	25	22.06	22.02
MW-4	ΣBHC	18.62	24.42	35.74	14.13	16.91	32.46	24.70	17.67	15.71	39.42	0.58	29.06	29.67	24.12	23.71	32.25
	Total Thickness	22.01	21.41	21.06	24.67	21.5	21.9	22.28	21.28	20.57	20.89	23.6	22.21	20.23	22.86	20.23	20.7
MW-5	ΣBHC	NA	0.10	0.22	0.10	0.10	0.10	0.12	0.16	0.10	0.23	0.22	NA	0.41	0.10	0.36	0.09
	Total Thickness	NA	18.69	18.36	20.7	20.28	18.38	19.19	18.49	18.04	18.18	20.1	NA	17.77	19.56	18.22	18.22
MW-6	ΣBHC	NA	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	NA	0.10	NA	0.15	0.09
	Total Thickness	NA	20.19	20.9	23.18	21.01	20.23	20.72	20.08	19.74	19.78	21.03	NA	19.44	NA	19.67	19.63
MW-7	ΣBHC	NA	0.10	0.11	0.11	0.10	0.11	0.11	0.10	0.11	0.12	0.10	NA	0.16	NA	0.10	NA
	Total Thickness	NA	25.24	24.76	28.83	25.78	24.93	26.78	22.59	24.37	24.91	27.23	NA	24.38	NA	24.5	NA
MW-8	ΣBHC	NA	0.46	0.22	0.12	0.10	0.15	0.13	0.10	0.10	0.21	0.25	0.32	0.29	0.13	0.22	0.19
	Total Thickness	NA	23.24	22.81	27.54	23.4	23.2	23.67	23.26	22.32	22.85	25.7	24.47	22.24	25.17	22.35	22.64
MW-9	ΣBHC	NA	1.01	1.35	2.47	2.47	4.90	5.69	5.17	6.75	4.73	4.39	5.73	3.02	3.04	2.36	1.22
	Total Thickness	NA	22.28	22.03	25.85	22.55	22.4	23.48	22.23	21.36	22.01	24.45	23.47	21.3	23.96	21.61	21.76
MW-10	ΣBHC	NA	58.38	32.03	23.44	16.13	26.80	8.40	16.87	26.64	5.27	13.29	17.95	14.51	13.00	9.65	12.19
	Total Thickness	NA	19.96	19.58	23.33	20.05	19.95	20.84	19.7	18.99	19.57	21.91	20.94	18.79	21.46	19.21	19.52
MW-11	ΣBHC	NA	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	NA	0.10	NA	0.10	NA
	Total Thickness	NA	12.78	12.41	14.17	12.84	12.72	13.58	12.75	12.26	12.55	13.84	NA	11.81	NA	12.25	NA

NA= not analyzed

Table 2-2 continued. Shallow and Deep Composite per Sampling Event

Well		4/93	9/93	4/95	10/95	2/96	5/96	9/96	12/96	3/97	10/97	3/98	10/98	3/99	11/99	4/00	10/00
MW-12	ΣBHC	NA	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.18	0.09
	Total Thickness	NA	12.63	12.4	14.27	12.66	12.48	13.47	12.4	12	12.17	13.79	12.85	11.5	13.29	12.03	12.00
MW-15	ΣBHC	NA	NA	NA	NA	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.09
	Total Thickness	NA	NA	NA	NA	11.12	10.4	11.33	12.5	10	10.13	11.85	10.87	9.74	11.25	10.03	9.99
MW-16	ΣBHC	NA	NA	NA	NA	NA	NA	NA	NA	NA	25.16	24.45	27.67	19.89	4.54	14.19	26.73
	Total Thickness	NA	NA	NA	NA	NA	NA	NA	NA	NA	18.42	20.2	19.2	17.85	19.6	18.31	18.44
MW-17	ΣBHC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	27.33	23.80	3.93	22.85	20.80
	Total Thickness	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	10.51	8.45	11.08	8.83	9.08
MW-A	ΣBHC	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	NA	NA	NA	NA	NA	NA
	Total Thickness	8.79	8.26	7.87	10.4	8.2	8.23	9	8	7.31	7.9	NA	NA	NA	NA	NA	NA
MW-D	ΣBHC	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	NA	0.16	NA	0.10	NA
	Total Thickness	11.76	11.2	10.85	13.99	11.42	11.18	12.65	11.35	10.22	8.89	13.25	NA	10.36	NA	10.36	NA
MW-P	ΣBHC	24.60	33.60	42.30	20.25	16.80	50.00	18.15	28.70	71.00	NA	NA	NA	NA	NA	NA	NA
	Total Thickness	12.43	11.98	11.6	13.76	11.7	11.73	12.37	11.69	11.23	NA	NA	NA	NA	NA	NA	NA

NA= not analyzed

Table 2-3. ΣBHC Annual Composite Values

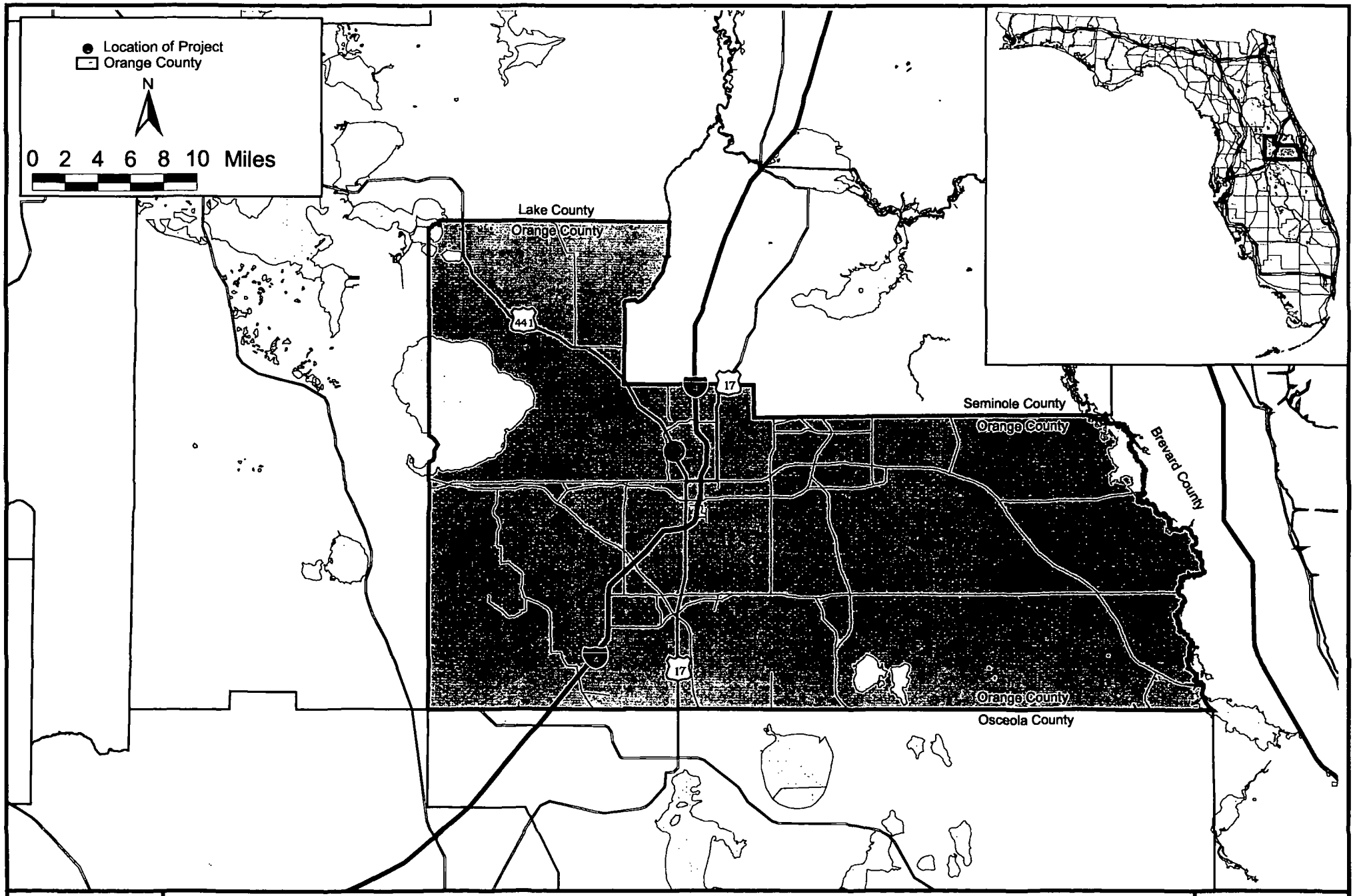
Well-ID	1993	1995	1996	1997	1998	1999	2000
MW-1	7.52	4.18	3.94	5.50	2.45	4.57	6.54
MW-2	0.62	0.34	0.24	0.16	0.29	0.92	0.49
MW-3	2.27	1.29	0.64	0.64	0.98	1.27	0.81
MW-4	21.68	27.10	22.82	27.27	15.88	27.28	27.81
MW-5	0.10	0.17	0.12	0.17	0.22	0.27	0.22
MW-6	0.10	0.10	0.10	0.10	0.10	0.10	0.12
MW-7	0.10	0.11	0.11	0.12	0.10	0.16	0.10
MW-8	0.46	0.19	0.12	0.15	0.29	0.22	0.21
MW-9	1.01	1.75	4.53	5.77	5.11	3.03	1.79
MW-10	58.38	28.56	17.25	16.21	15.71	13.82	10.90
MW-11	0.10	0.10	0.10	0.10	0.10	0.10	0.10
MW-12	0.10	0.10	0.10	0.10	0.10	0.10	0.13
MW-15	0.1	0.1	0.10	0.10	0.10	0.10	0.09
MW-16	NA	NA	NA	*42.52*	26.13	12.74	20.40
MW-17	NA	NA	NA	NA	27.33	15.14	21.84
MW-A	0.10	0.10	0.10	0.1	0.1	0.1	0.10
MW-D	0.10	0.10	0.10	0.10	0.10	0.16	0.10
MW-P	29.18	30.24	28.53	NA	NA	NA	NA

NA=not analyzed

Table 2-4. Mass of Total BHC in the Groundwater System
(mass in grams)

	Total BHC
1993	1968
1995	1604
1996	1331
1997	1645
1998	1247
1999	976
2000	965

Figures

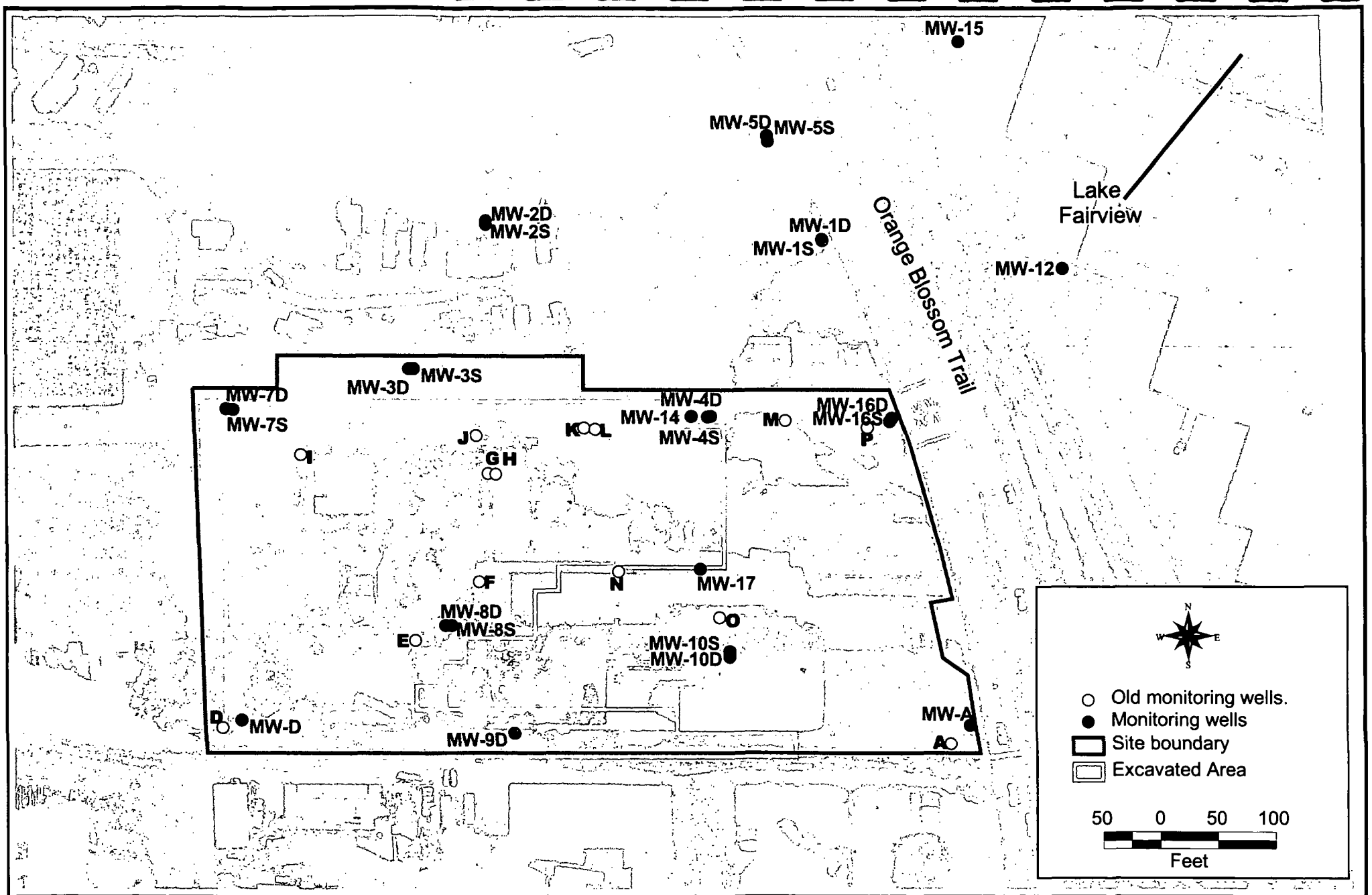


Generation Date: 8/31/99

Figure 1-1. Chevron Orlando, Florida, project location map

Geomega

\\ph\L:\projects\chevron\orlando\orlando.apr: Figure 1-1 a layout

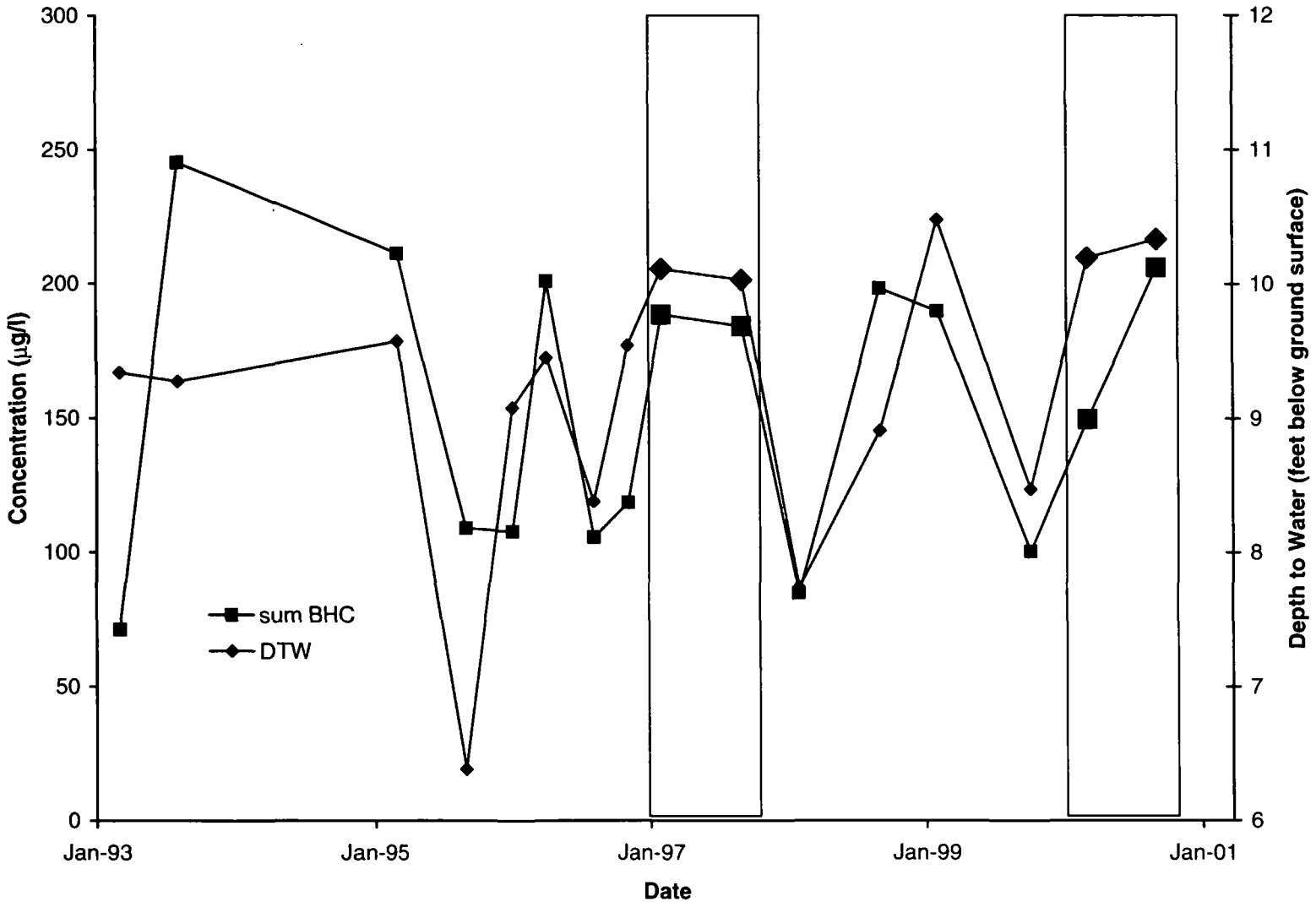


Genration Date: 11/9/00

Figure 1-2. Site features and Monitoring Wells, Chevron Orlando, Florida

Geomega

I:\projects\chevron\orlando\images\characterization.apr features and wells



Generation Date: 12/7/00	Figure 2-1. Correlation between total BHC concentration and depth to water at the Chevon Orlando, Florida site.	Geomega

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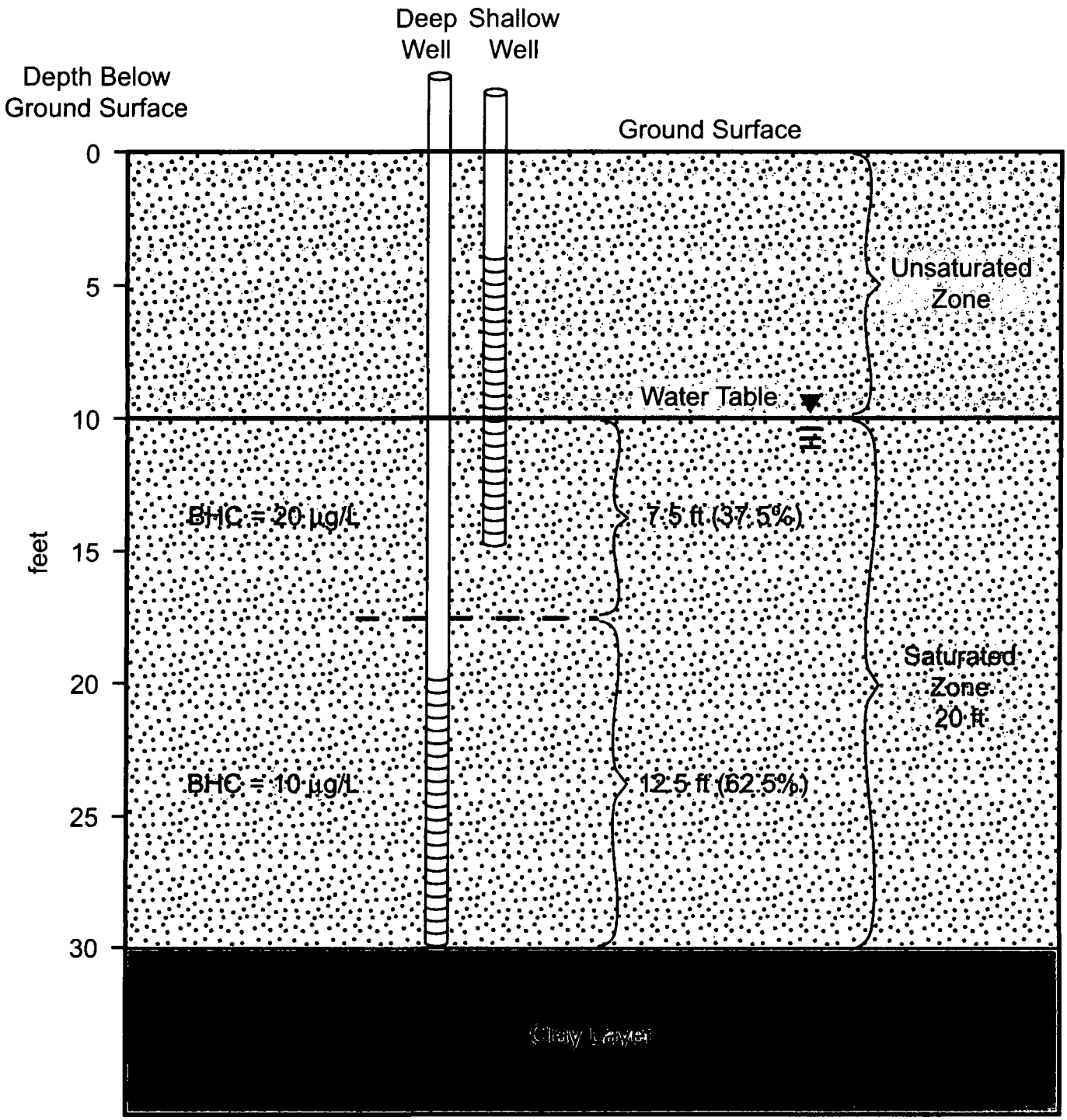

Weighted Average = .375(20) + .625(10)
= 13.75 µg/L

Generation Date: 12/13/00	Figure 2-2. Schemetic for depth-weighted averaging.	Geomega

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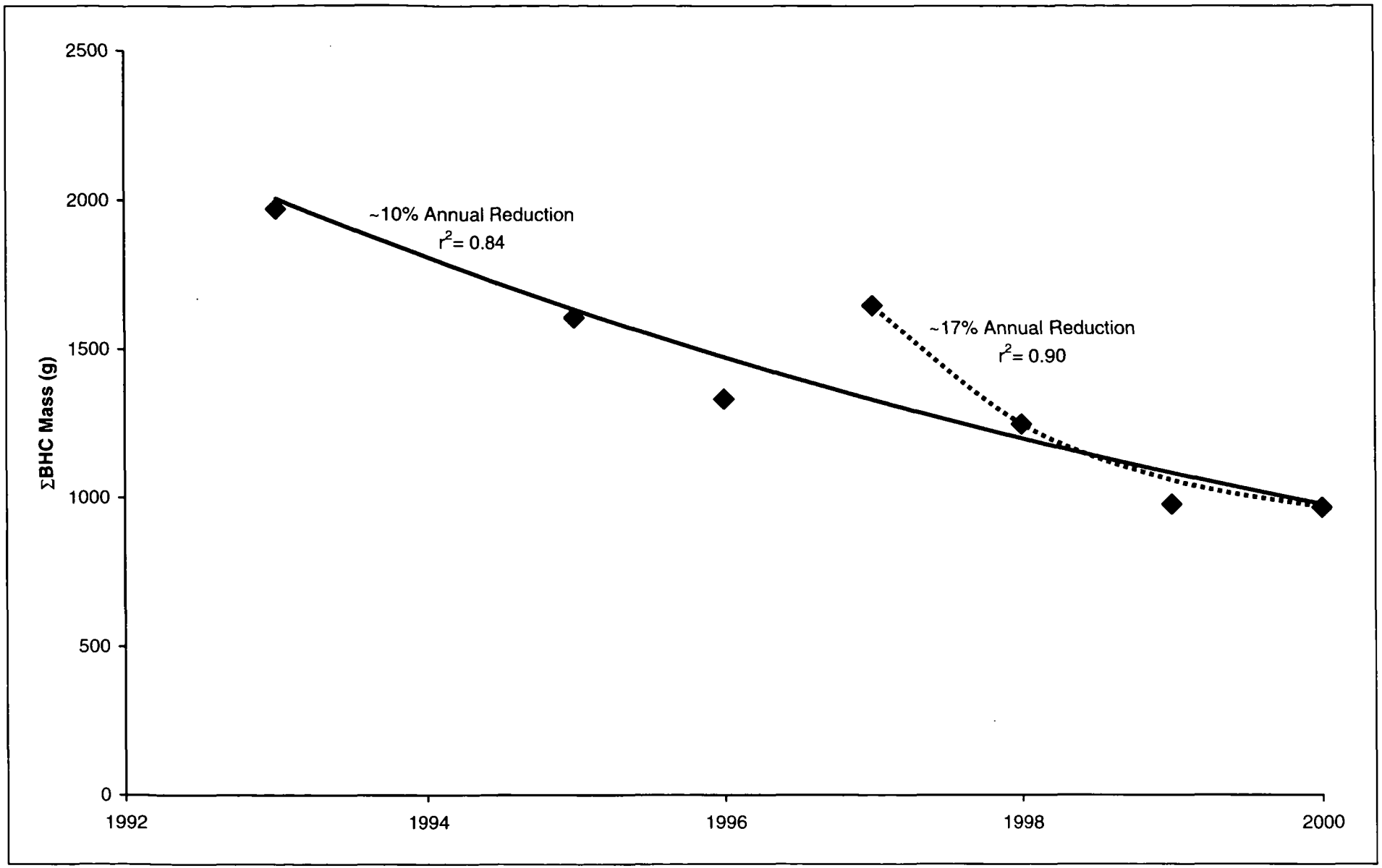

Generation Date: 12/7/00	Figure 2-3. Σ-BHC mass in Chevron Orlando groundwater.	Geomega

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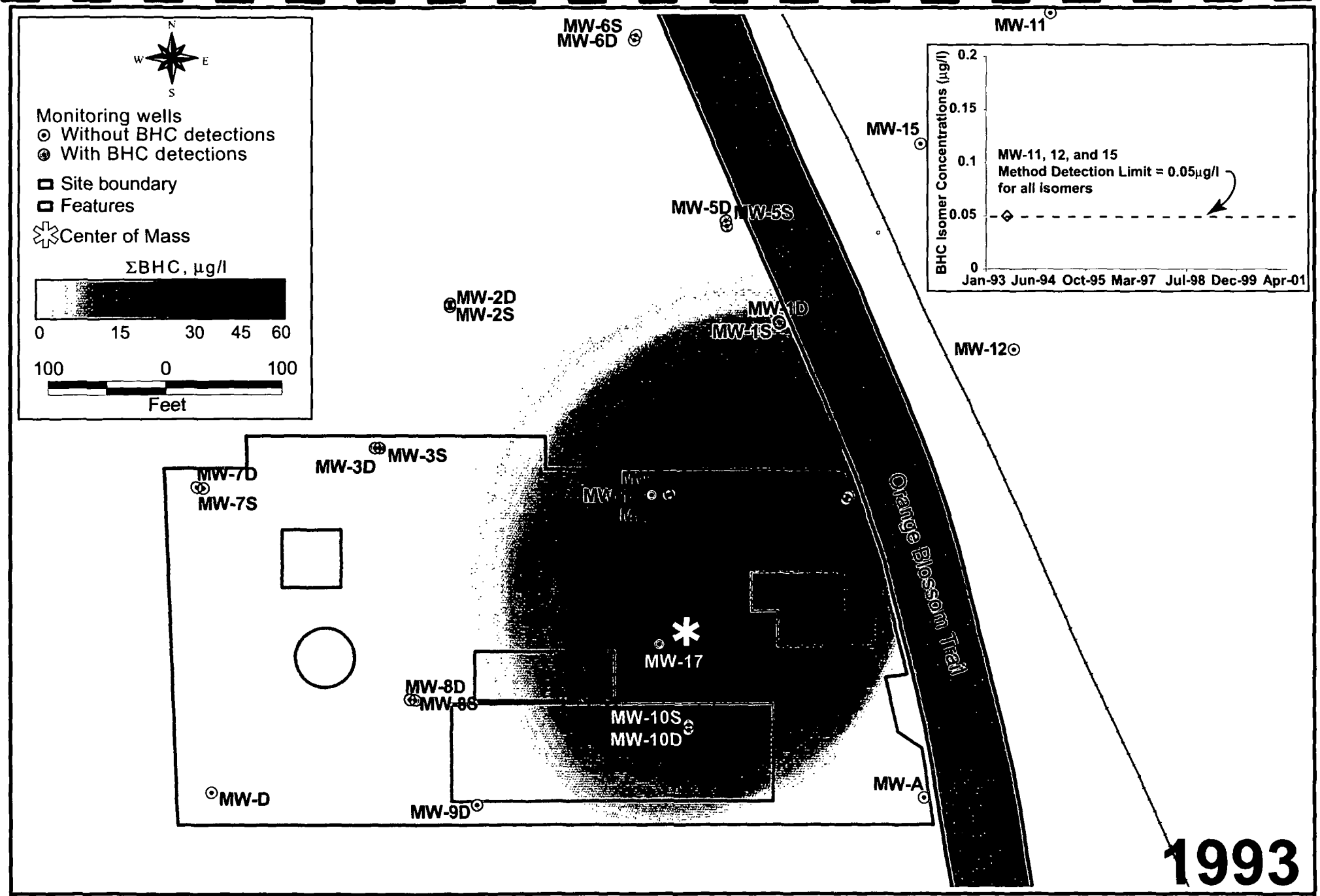
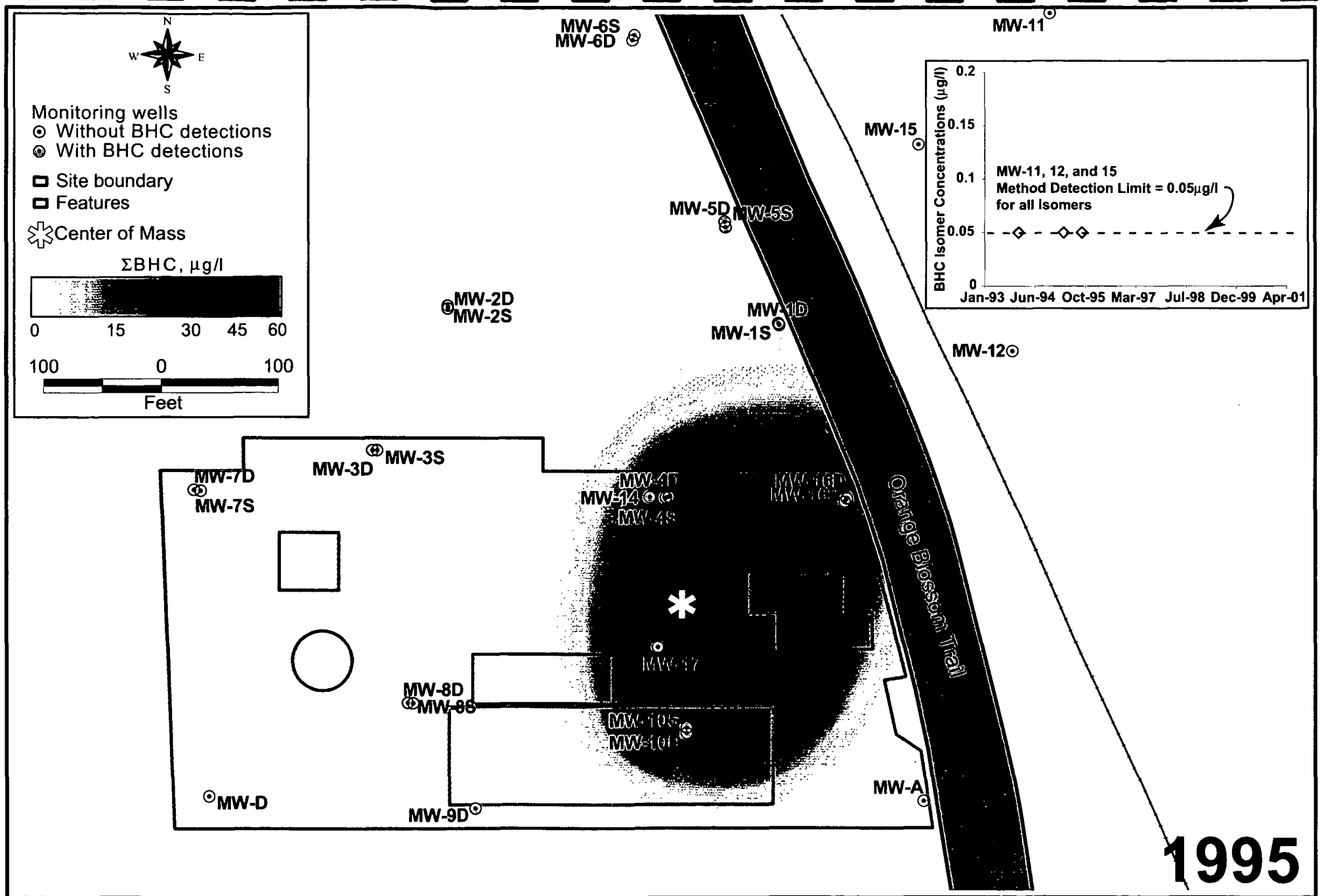


Generation Date:12/13/00

Figure 2-4. Definition of ΣBHC Center of Mass (✻) and Non-detect Wells (⊙) in Chevron, Orlando Groundwater

Geomega



Generation Date:12/13/00

Figure 2-5. Definition of ΣBHC Center of Mass (✻) and Non-detect Wells (⊙) in Chevron, Orlando Groundwater

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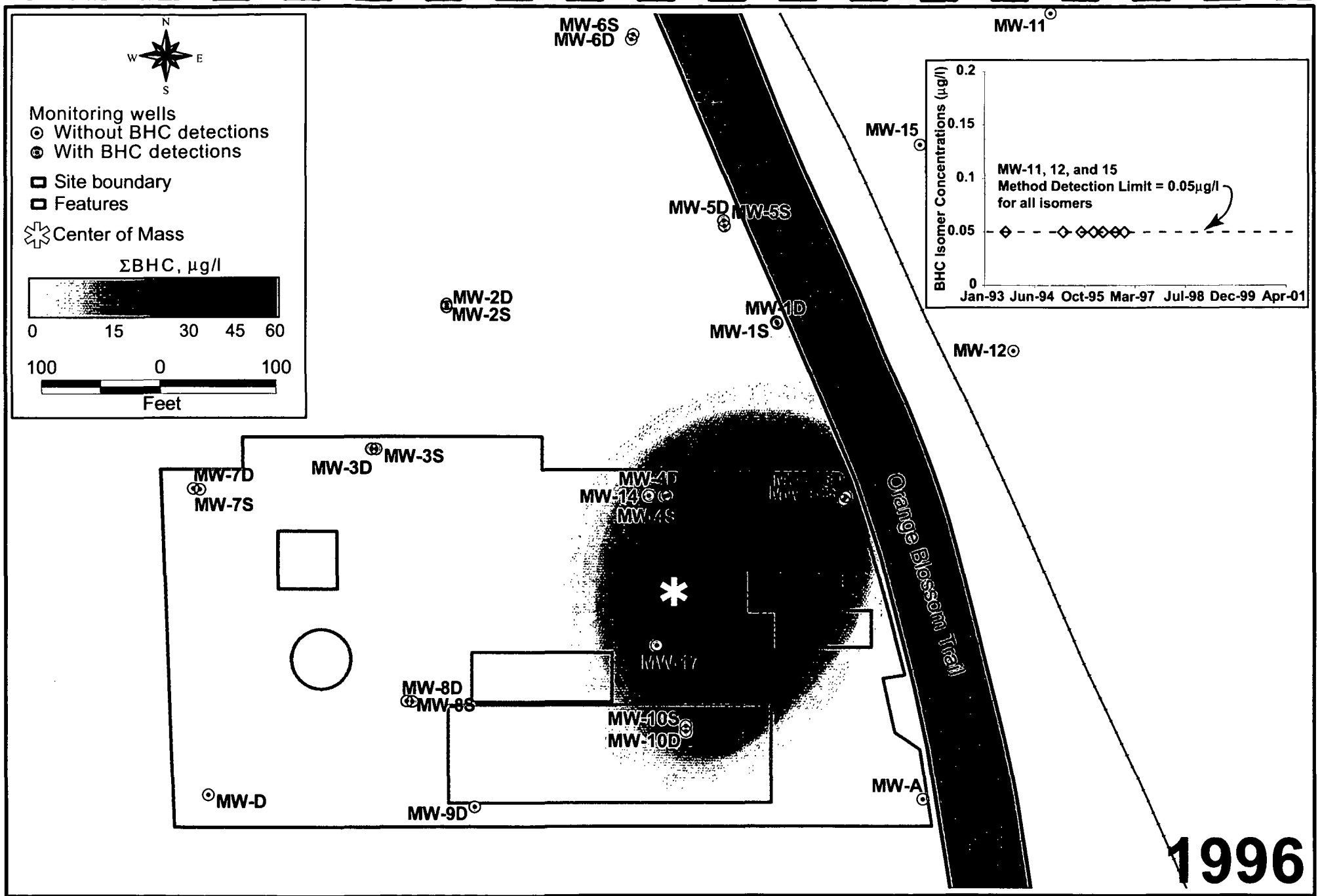

Generation Date:12/13/00

Figure 2-6. Definition of ΣBHC Center of Mass (✱) and Non-detect Wells (⊙) in Chevron, Orlando Groundwater

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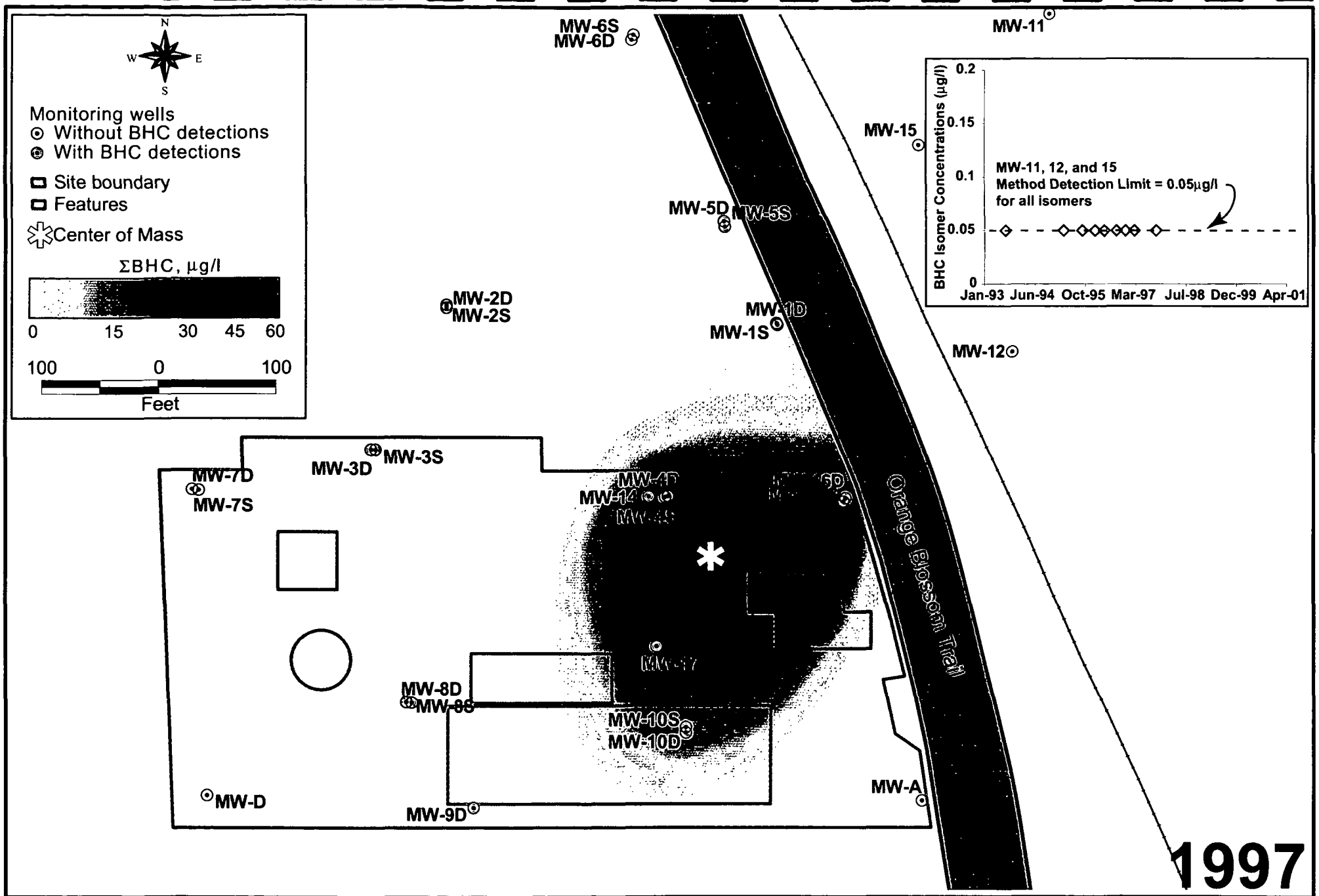

Generation Date:12/13/00

Figure 2-7. Definition of ΣBHC Center of Mass (✻) and Non-detect Wells (⊙) in Chevron, Orlando Groundwater

Geomega

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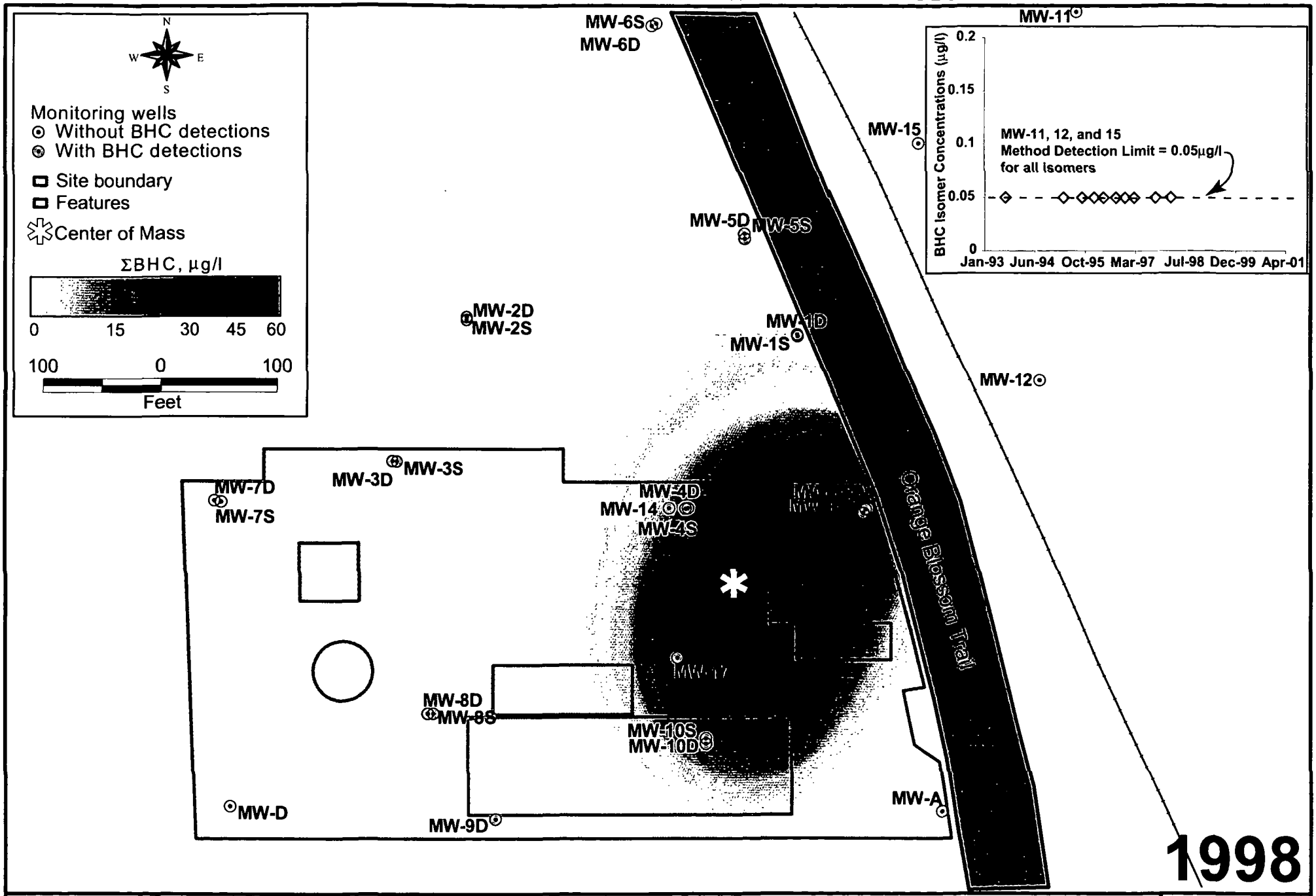

Generation Date:12/13/00

Figure 2-8. Definition of ΣBHC Center of Mass (✱) and Non-detect Wells (⊙) in Chevron, Orlando Groundwater

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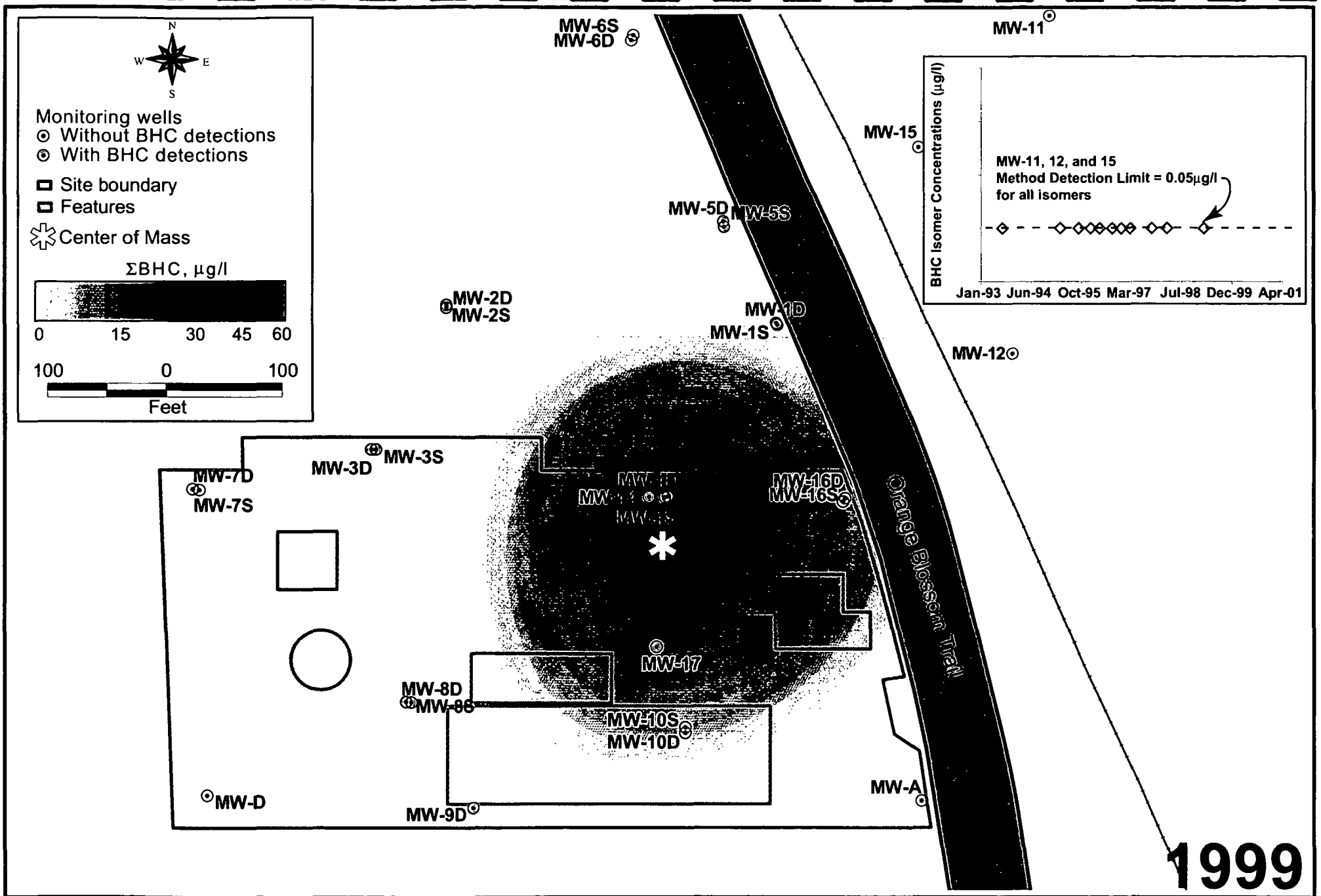

Generation Date:12/13/00

Figure 2-9. Definition of ΣBHC Center of Mass (✻) and Non-detect Wells (⊙) in Chevron, Orlando Groundwater

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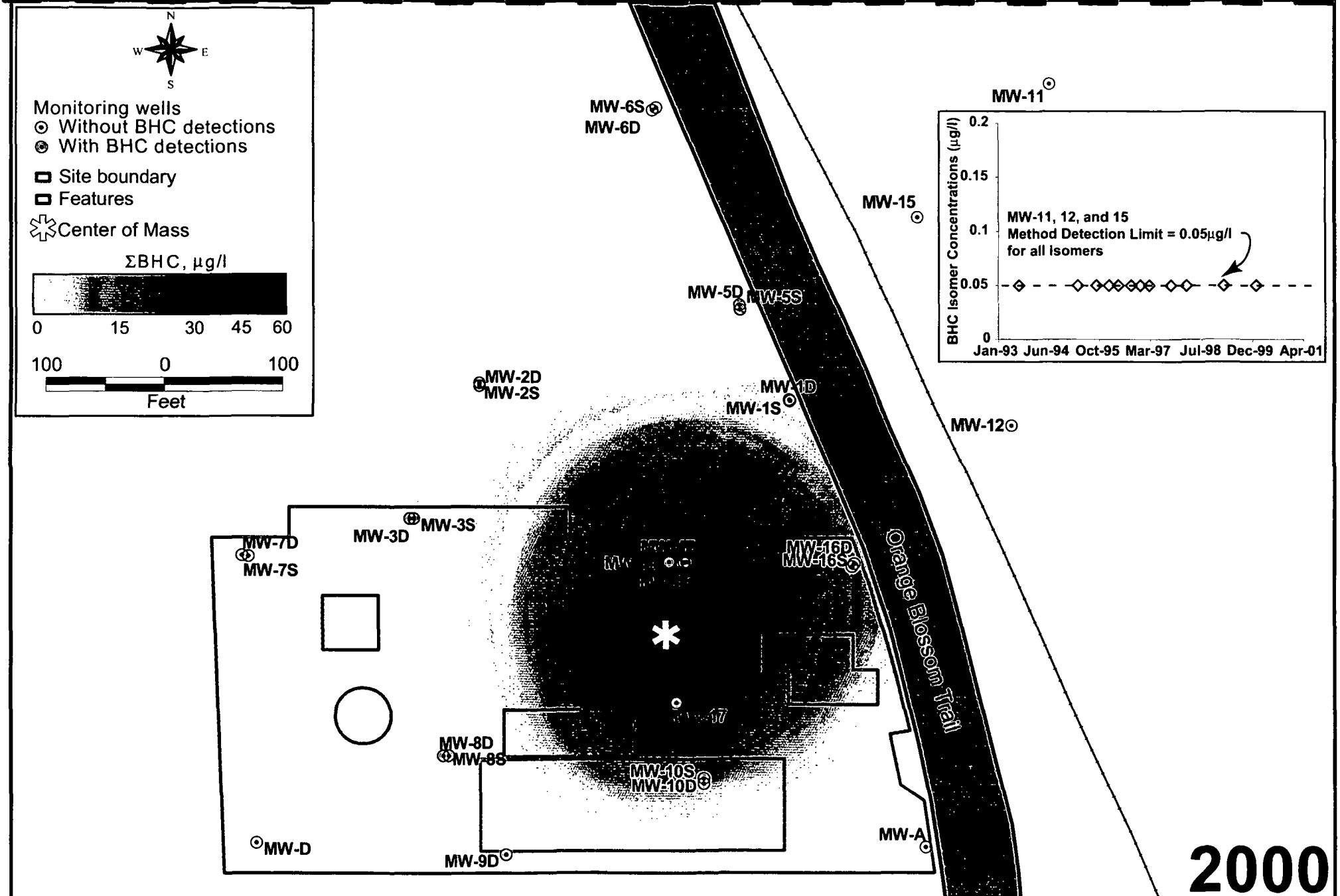

Generation Date:12/13/00

Figure 2-10. Definition of ΣBHC Center of Mass (✱) and Non-detect Wells (⊙) in Chevron, Orlando Groundwater

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Appendix A

Appendix A: Total BHC and Water Level Data

Well ID	Date	Total BHC (ug/l)*	Depth to Water (feet bgs)	Saturated Thickness (feet)	α-BHC (ug/l)	β-BHC (ug/l)	γ-BHC (ug/l)	δ-BHC (ug/l)
MW-10D	09/01/1993	20.25	11.15	11.5	1.1	6.1	1.05	12
MW-10D	04/01/1995	6.61	11.53	11.5	0.55	4.6	0.87	0.59
MW-10D	10/01/1995	2.72	7.81	11.5	0.025	2.6	0.025	0.07
MW-10D	02/01/1996	1.55	9.95	11.5	0.15	1.2	0.09	0.11
MW-10D	05/01/1996	1.37	11.15	11.5	0.025	1.27	0.025	0.05
MW-10D	09/01/1996	0.2	10.27	11.5	0.05	0.05	0.05	0.05
MW-10D	12/01/1996	0.1	11.4	11.5	0.025	0.025	0.025	0.025
MW-10D	03/01/1997	0.1	12.11	11.5	0.025	0.025	0.025	0.025
MW-10D	10/01/1997	0.33	11.54	11.5	0.005	0.3	0.005	0.02
MW-10D	03/01/1998	0.255	9.4	11.5	0.025	0.19	0.015	0.025
MW-10D	10/01/1998	0.837	10.17	11.5	0.065	0.6	0.086	0.086
MW-10D	03/01/1999	0.57	11.34	11.5	0.15	0.12	0.15	0.15
MW-10D	11/01/1999	0.705	9.66	11.5	0.025	0.63	0.025	0.025
MW-10D	04/01/2000	0.1	11.95	11.5	0.025	0.025	0.025	0.025
MW-10D	10/01/2000	0.955	11.6	11.5	0.02	0.84	0.025	0.07
MW-10S	09/01/1993	110.2	10.04	8.46	2	70	1.2	37
MW-10S	04/01/1995	68.2	10.42	8.08	3.6	47	1.6	16
MW-10S	10/01/1995	43.58	6.67	11.83	2.6	28	0.98	12
MW-10S	02/01/1996	35.75	9.95	8.55	4.5	18	3.75	9.5
MW-10S	05/01/1996	61.4	10.05	8.45	6.8	32	6.6	16
MW-10S	09/01/1996	18.5	9.16	9.34	2.1	7.5	1.9	7
MW-10S	12/01/1996	40.4	10.3	8.2	4.7	23	3.4	9.3
MW-10S	03/01/1997	67.4	11.01	7.49	5.7	46	3.7	12
MW-10S	10/01/1997	12.3	10.43	8.07	0.8	8	0.5	3
MW-10S	03/01/1998	27.7	8.09	10.41	2.05	18	1.1	6.55
MW-10S	10/01/1998	38.8	9.06	9.44	3.5	24	2.3	9
MW-10S	03/01/1999	36.5	11.21	7.29	2.7	23	1.8	9
MW-10S	11/01/1999	27.2	8.54	9.96	1	21	0.5	4.7
MW-10S	04/01/2000	23.9	10.79	7.71	2.4	15	1.8	4.7
MW-10S	10/01/2000	28.3	10.48	8.02	1.8	19	1.1	6.4
MW-11	09/01/1993	0.1	7.22	12.78	0.025	0.025	0.025	0.025
MW-11	04/01/1995	0.1	7.59	12.41	0.025	0.025	0.025	0.025
MW-11	10/01/1995	0.1	5.83	14.17	0.025	0.025	0.025	0.025
MW-11	02/01/1996	0.1	7.16	12.84	0.025	0.025	0.025	0.025
MW-11	05/01/1996	0.1	7.28	12.72	0.025	0.025	0.025	0.025
MW-11	09/01/1996	0.1	6.42	13.58	0.025	0.025	0.025	0.025
MW-11	12/01/1996	0.1	7.25	12.75	0.025	0.025	0.025	0.025
MW-11	03/01/1997	0.1	7.74	12.26	0.025	0.025	0.025	0.025

Appendix A: Total BHC and Water Level Data

Well ID	Date	Total BHC (ug/l)*	Depth to Water (feet bgs)	Saturated Thickness (feet)	α-BHC (ug/l)	β-BHC (ug/l)	γ-BHC (ug/l)	δ-BHC (ug/l)
MW-11	10/01/1997	0.1	7.45	12.55	0.025	0.025	0.025	0.025
MW-11	03/01/1998	0.1	6.16	13.84	0.025	0.025	0.025	0.025
MW-11	03/01/1999	0.1	8.19	11.81	0.025	0.025	0.025	0.025
MW-11	04/01/2000	0.1	7.75	12.25	0.025	0.025	0.025	0.025
MW-12	09/01/1993	0.1	7.37	12.63	0.025	0.025	0.025	0.025
MW-12	04/01/1995	0.1	7.6	12.4	0.025	0.025	0.025	0.025
MW-12	10/01/1995	0.1	5.73	14.27	0.025	0.025	0.025	0.025
MW-12	02/01/1996	0.1	7.34	12.66	0.025	0.025	0.025	0.025
MW-12	05/01/1996	0.1	7.52	12.48	0.025	0.025	0.025	0.025
MW-12	09/01/1996	0.1	6.53	13.47	0.025	0.025	0.025	0.025
MW-12	12/01/1996	0.1	7.6	12.4	0.025	0.025	0.025	0.025
MW-12	03/01/1997	0.1	8	12	0.025	0.025	0.025	0.025
MW-12	10/01/1997	0.1	7.83	12.17	0.025	0.025	0.025	0.025
MW-12	03/01/1998	0.1	6.21	13.79	0.025	0.025	0.025	0.025
MW-12	10/01/1998	0.1	7.15	12.85	0.025	0.025	0.025	0.025
MW-12	03/01/1999	0.1	8.5	11.5	0.025	0.025	0.025	0.025
MW-12	11/01/1999	0.1	6.71	13.29	0.025	0.025	0.025	0.025
MW-12	04/01/2000	0.175	7.97	12.03	0.025	0.025	0.025	0.1
MW-12	10/01/2000	0.085	8	12	0.02	0.025	0.025	0.015
MW-15	02/01/1996	0.1	8.88	11.12	0.025	0.025	0.025	0.025
MW-15	05/01/1996	0.1	9.6	10.4	0.025	0.025	0.025	0.025
MW-15	09/01/1996	0.1	8.67	11.33	0.025	0.025	0.025	0.025
MW-15	12/01/1996	0.1	7.5	12.5	0.025	0.025	0.025	0.025
MW-15	03/01/1997	0.1	10	10	0.025	0.025	0.025	0.025
MW-15	10/01/1997	0.1	9.87	10.13	0.025	0.025	0.025	0.025
MW-15	03/01/1998	0.1	8.15	11.85	0.025	0.025	0.025	0.025
MW-15	10/01/1998	0.1	9.13	10.87	0.025	0.025	0.025	0.025
MW-15	03/01/1999	0.1	10.26	9.74	0.025	0.025	0.025	0.025
MW-15	11/01/1999	0.1	8.75	11.25	0.025	0.025	0.025	0.025
MW-15	04/01/2000	0.1	9.97	10.03	0.025	0.025	0.025	0.025
MW-15	10/01/2000	0.085	10.01	9.99	0.02	0.025	0.025	0.015
MW-16D	10/01/1997	16.5	13.05	11	1	10	0.5	5
MW-16D	03/01/1998	36.1	11.4	11	5.2	17	5.6	8.3
MW-16D	10/01/1998	38.3	12.4	11	4.5	21	4.5	8.3
MW-16D	03/01/1999	23	13.8	11	1.75	14	1.15	6.1
MW-16D	11/01/1999	5.17	12.05	11	0.25	4.1	0.25	0.57
MW-16D	04/01/2000	6.87	13.26	11	0.74	4.4	0.63	1.1
MW-16D	10/01/2000	0.37	13	11	0.02	0.31	0.025	0.015
MW-16S	10/01/1997	38	13.58	7.42	5	20	5	8
MW-16S	03/01/1998	10.52	11.8	9.2	0.84	6.7	0.88	2.1
MW-16S	10/01/1998	13.4	12.8	8.2	1	8.3	1.3	2.8

Appendix A: Total BHC and Water Level Data

Well ID	Date	Total BHC (ug/l)*	Depth to Water (feet bgs)	Saturated Thickness (feet)	α-BHC (ug/l)	β-BHC (ug/l)	γ-BHC (ug/l)	δ-BHC (ug/l)
MW-16S	03/01/1999	14.9	14.15	6.85	4.1	1.7	2.8	6.3
MW-16S	11/01/1999	3.74	12.4	8.6	0.025	3.2	0.025	0.49
MW-16S	04/01/2000	25.2	13.69	7.31	1.9	17	1.9	4.4
MW-16S	10/01/2000	65.7	13.56	7.44	8.9	36	7.8	13
MW-17	10/01/1998	27.325	9.49	10.51	8	0.025	4.3	15
MW-17	03/01/1999	23.8	11.55	8.45	5.6	5.3	1.9	11
MW-17	11/01/1999	3.93	8.92	11.08	0.68	1.3	0.25	1.7
MW-17	04/01/2000	22.85	11.17	8.83	5.9	4.75	2.35	9.85
MW-17	10/01/2000	20.8	10.92	9.08	5.5	4.4	1.4	9.5
MW-1D	10/01/1991	1.525	9.75	12.5	0.5	0.5	0.025	0.5
MW-1D	04/01/1993	5.555	9.78	12.5	2.2	0.93	0.025	2.4
MW-1D	09/01/1993	6.825	10.05	12.5	2	1.5	0.025	3.3
MW-1D	04/01/1995	2.925	10.87	12.5	0.77	0.53	0.025	1.6
MW-1D	10/01/1995	2.95	8.84	12.5	1	0.025	0.025	1.9
MW-1D	02/01/1996	3.605	10.4	12.5	0.96	0.92	0.025	1.7
MW-1D	05/01/1996	3.605	10.24	12.5	0.8	0.88	0.025	1.9
MW-1D	09/01/1996	3.035	10	12.5	0.59	0.92	0.025	1.5
MW-1D	12/01/1996	1.56	10.66	12.5	0.92	0.59	0.025	0.025
MW-1D	03/01/1997	1.175	11.24	12.5	1.1	0.025	0.025	0.025
MW-1D	10/01/1997	5.025	10.89	12.5	1	1	0.025	3
MW-1D	03/01/1998	0.1	9.2	12.5	0.025	0.025	0.025	0.025
MW-1D	10/01/1998	2.55	10.09	12.5	1.2	0.025	0.025	1.3
MW-1D	03/01/1999	3.695	11.34	12.5	0.87	1.1	0.025	1.7
MW-1D	11/01/1999	3.195	9.55	12.5	0.82	1.1	0.025	1.25
MW-1D	04/01/2000	4.2025	10.8	12.5	1.075	1.85	0.0775	1.2
MW-1D	10/01/2000	8.99	10.85	12.5	1.7	3.7	0.19	3.4
MW-1S	10/01/1991	1.655	9.83	7.67	0.26	0.4	0.025	0.97
MW-1S	04/01/1993	4.615	10	7.5	0.92	0.77	0.025	2.9
MW-1S	09/01/1993	14.725	10.06	7.44	5	2	0.025	7.7
MW-1S	04/01/1995	6.125	10.77	6.73	2.5	1.3	0.025	2.3
MW-1S	10/01/1995	6.315	8.75	8.75	1.9	0.89	0.025	3.5
MW-1S	02/01/1996	7.325	10.45	7.05	1.4	1.4	0.025	4.5
MW-1S	05/01/1996	6.525	10.8	6.7	1.7	1.4	0.025	3.4
MW-1S	09/01/1996	5.985	10	7.5	1.4	0.76	0.025	3.8
MW-1S	12/01/1996	3.175	10.76	6.74	3.1	0.025	0.025	0.025
MW-1S	03/01/1997	4.425	11.23	6.27	3.9	0.25	0.025	0.25
MW-1S	10/01/1997	16.025	10.87	6.63	4	2	0.025	10
MW-1S	03/01/1998	0.1	9.22	8.28	0.025	0.025	0.025	0.025
MW-1S	10/01/1998	8.025	10.04	7.46	1.8	0.2	0.025	6
MW-1S	03/01/1999	11.525	11.45	6.05	2.5	2.5	0.025	6.5
MW-1S	11/01/1999	1.615	9.62	7.88	0.26	0.48	0.025	0.85

Appendix A: Total BHC and Water Level Data

Well ID	Date	Total BHC (ug/l)*	Depth to Water (feet bgs)	Saturated Thickness (feet)	α-BHC (ug/l)	β-BHC (ug/l)	γ-BHC (ug/l)	δ-BHC (ug/l)
MW-1S	04/01/2000	5.625	10.72	6.78	1.4	1.7	0.125	2.4
MW-1S	10/01/2000	7.19	10.78	6.72	0.84	1.1	0.25	5
MW-2D	10/01/1991	1.205	6	12	0.68	0.25	0.025	0.25
MW-2D	04/01/1993	0.1	6.61	12	0.025	0.025	0.025	0.025
MW-2D	09/01/1993	1.895	7.31	12	0.26	1.4	0.025	0.21
MW-2D	04/01/1995	0.725	7.68	12	0.125	0.45	0.025	0.125
MW-2D	10/01/1995	0.1	3.7	12	0.025	0.025	0.025	0.025
MW-2D	02/01/1996	0.555	7.1	12	0.11	0.23	0.025	0.19
MW-2D	05/01/1996	0.44	7.62	12	0.025	0.24	0.025	0.15
MW-2D	09/01/1996	0.33	6.3	12	0.025	0.18	0.025	0.1
MW-2D	12/01/1996	0.1	7.28	12	0.025	0.025	0.025	0.025
MW-2D	03/01/1997	0.1	8.16	12	0.025	0.025	0.025	0.025
MW-2D	10/01/1997	0.28	7.8	12	0.05	0.2	0.025	0.005
MW-2D	03/01/1998	0.67	5.27	12	0.18	0.44	0.025	0.025
MW-2D	10/01/1998	0.274	6.5	12	0.125	0.025	0.025	0.099
MW-2D	03/01/1999	0.695	8.45	12	0.13	0.36	0.025	0.18
MW-2D	11/01/1999	3.05	5.69	12	1.3	0.4	1.3	0.05
MW-2D	04/01/2000	0.9	8.01	12	0.44	0.41	0.025	0.025
MW-2D	10/01/2000	0.685	8	12	0.62	0.025	0.025	0.015
MW-2S	10/01/1991	0.1	5.9	11.1	0.025	0.025	0.025	0.025
MW-2S	04/01/1993	0.1	6.64	10.36	0.025	0.025	0.025	0.025
MW-2S	09/01/1993	0.1	7.37	9.63	0.025	0.025	0.025	0.025
MW-2S	04/01/1995	0.1	7.55	9.45	0.025	0.025	0.025	0.025
MW-2S	10/01/1995	0.1	3.59	13.41	0.025	0.025	0.025	0.025
MW-2S	02/01/1996	0.1	7	10	0.025	0.025	0.025	0.025
MW-2S	05/01/1996	0.1	7.55	9.45	0.025	0.025	0.025	0.025
MW-2S	09/01/1996	0.1	6.17	10.83	0.025	0.025	0.025	0.025
MW-2S	12/01/1996	0.1	7.19	9.81	0.025	0.025	0.025	0.025
MW-2S	03/01/1997	0.1	7.98	9.02	0.025	0.025	0.025	0.025
MW-2S	10/01/1997	0.155	7.6	9.4	0.02	0.07	0.025	0.04
MW-2S	03/01/1998	0.1	5.16	11.84	0.025	0.025	0.025	0.025
MW-2S	10/01/1998	0.125	6.4	10.6	0.025	0.05	0.025	0.025
MW-2S	03/01/1999	0.1	8.37	8.63	0.025	0.025	0.025	0.025
MW-2S	11/01/1999	0.1	5.6	11.4	0.025	0.025	0.025	0.025
MW-2S	04/01/2000	0.1	7.95	9.05	0.025	0.025	0.025	0.025
MW-2S	10/01/2000	0.085	7.83	9.17	0.02	0.025	0.025	0.015
MW-3D	10/01/1991	0.3	4.94	12.5	0.125	0.125	0.025	0.025
MW-3D	09/01/1993	0.1	8.43	12.5	0.025	0.025	0.025	0.025
MW-3D	04/01/1995	0.125	8.7	12.5	0.025	0.05	0.025	0.025
MW-3D	10/01/1995	0.225	4.94	12.5	0.05	0.07	0.025	0.08
MW-3D	02/01/1996	0.135	8.55	12.5	0.06	0.025	0.025	0.025

Appendix A: Total BHC and Water Level Data

Well ID	Date	Total BHC (ug/l)*	Depth to Water (feet bgs)	Saturated Thickness (feet)	α-BHC (ug/l)	β-BHC (ug/l)	γ-BHC (ug/l)	δ-BHC (ug/l)
MW-3D	05/01/1996	0.1	9.08	12.5	0.025	0.025	0.025	0.025
MW-3D	09/01/1996	0.1	7.49	12.5	0.025	0.025	0.025	0.025
MW-3D	12/01/1996	0.1	8.78	12.5	0.025	0.025	0.025	0.025
MW-3D	03/01/1997	0.1	9.54	12.5	0.025	0.025	0.025	0.025
MW-3D	10/01/1997	0.22	9.28	12.5	0.09	0.1	0.025	0.005
MW-3D	03/01/1998	0.202	6.69	12.5	0.076	0.076	0.025	0.025
MW-3D	10/01/1998	0.38	7.79	12.5	0.14	0.19	0.025	0.025
MW-3D	03/01/1999	0.495	10	12.5	0.13	0.13	0.025	0.21
MW-3D	11/01/1999	0.3	7.05	12.5	0.11	0.14	0.025	0.025
MW-3D	04/01/2000	1.18	9.73	12.5	0.46	0.125	0.125	0.47
MW-3D	10/01/2000	0.26	9.6	12.5	0.08	0.14	0.025	0.015
MW-3S	10/01/1991	0.835	4.78	14.72	0.075	0.61	0.075	0.075
MW-3S	09/01/1993	4.885	9.11	10.39	0.955	3.1	0.025	0.805
MW-3S	04/01/1995	3.775	9.1	10.4	0.605	2.1	0.125	0.945
MW-3S	10/01/1995	0.58	4.55	14.95	0.24	0.05	0.05	0.24
MW-3S	02/01/1996	1.255	8.64	10.86	0.43	0.45	0.025	0.35
MW-3S	05/01/1996	2.14	9.21	10.29	0.485	0.94	0.025	0.69
MW-3S	09/01/1996	1.05	7.37	12.13	0.52	0.025	0.025	0.48
MW-3S	12/01/1996	0.5	8.75	10.75	0.125	0.125	0.125	0.125
MW-3S	03/01/1997	0.5	9.93	9.57	0.125	0.125	0.125	0.125
MW-3S	10/01/1997	2.005	9.46	10.04	0.6	0.8	0.005	0.6
MW-3S	03/01/1998	1.97	6.46	13.04	0.46	0.89	0.09	0.53
MW-3S	10/01/1998	1.41	7.83	11.67	0.39	0.74	0.02	0.26
MW-3S	03/01/1999	3.79	10.13	9.37	0.35	0.99	0.25	2.2
MW-3S	11/01/1999	0.41	7	12.5	0.17	0.14	0.05	0.05
MW-3S	04/01/2000	1.245	9.94	9.56	0.35	0.68	0.025	0.19
MW-3S	10/01/2000	0.58	9.98	9.52	0.37	0.025	0.17	0.015
MW-4D	10/01/1991	21.125	8.61	12	3.2	4.9	0.025	13
MW-4D	04/01/1993	24.125	9.01	12	5.7	2.4	0.025	16
MW-4D	09/01/1993	21.825	10.04	12	5.3	3.5	0.025	13
MW-4D	04/01/1995	18.025	9.9	12	4.5	3.5	0.025	10
MW-4D	10/01/1995	15.525	6.59	12	2.8	5.6	0.025	7.1
MW-4D	02/01/1996	5.325	11.73	12	1.3	1.1	0.025	2.9
MW-4D	05/01/1996	13.025	10.85	12	2.5	4.1	0.025	6.4
MW-4D	09/01/1996	15.025	9.24	12	3.4	4.5	0.025	7.1
MW-4D	12/01/1996	10.95	10.23	12	6.2	4.7	0.025	0.025
MW-4D	03/01/1997	4.925	10.9	12	4.4	0.25	0.025	0.25
MW-4D	10/01/1997	16.025	10.37	12	4	2	0.025	10
MW-4D	03/01/1998	0.175	7.94	12	0.05	0.05	0.025	0.05
MW-4D	10/01/1998	15.925	9.21	12	3.1	3.6	0.025	9.2
MW-4D	03/01/1999	15.825	11.23	12	4.1	3.1	0.025	8.6

Appendix A: Total BHC and Water Level Data

Well ID	Date	Total BHC (ug/l)*	Depth to Water (feet bgs)	Saturated Thickness (feet)	α-BHC (ug/l)	β-BHC (ug/l)	γ-BHC (ug/l)	δ-BHC (ug/l)
MW-4D	11/01/1999	33.55	8.46	12	8.4	11	0.15	14
MW-4D	04/01/2000	11.125	11.23	12	3.45	3.15	0.025	4.5
MW-4D	10/01/2000	17.35	10.38	12	4.4	3.3	0.25	9.4
MW-4S	10/01/1991	8.825	9.12	10.88	1.3	1.6	0.025	5.9
MW-4S	04/01/1993	12.025	9.99	10.01	4.5	1.7	0.025	5.8
MW-4S	09/01/1993	27.725	10.59	9.41	9.2	3.5	0.025	15
MW-4S	04/01/1995	59.2	10.94	9.06	19	8.7	0.5	31
MW-4S	10/01/1995	12.8	7.33	12.67	8.7	3.6	0.25	0.25
MW-4S	02/01/1996	31.55	10.5	9.5	12	4.3	0.25	15
MW-4S	05/01/1996	56.025	10.1	9.9	19	11	0.025	26
MW-4S	09/01/1996	36	9.72	10.28	10	10	1	15
MW-4S	12/01/1996	26.35	10.72	9.28	17	9.3	0.025	0.025
MW-4S	03/01/1997	30.8	11.43	8.57	8.3	0.25	0.25	22
MW-4S	10/01/1997	71	11.11	8.89	20	10	1	40
MW-4S	03/01/1998	1	8.4	11.6	0.25	0.25	0.25	0.25
MW-4S	10/01/1998	44.5	9.79	10.21	10	14	0.5	20
MW-4S	03/01/1999	49.85	11.77	8.23	15	7.6	1.25	26
MW-4S	11/01/1999	13.695	9.14	10.86	3.75	2.9	0.295	6.75
MW-4S	04/01/2000	42.05	11.77	8.23	9.1	8.7	0.25	24
MW-4S	10/01/2000	52.8	11.3	8.7	9.05	11	0.25	32.5
MW-5D	09/01/1993	0.1	10.54	12.25	0.025	0.025	0.025	0.025
MW-5D	04/01/1995	0.28	10.83	12.25	0.025	0.15	0.025	0.08
MW-5D	10/01/1995	0.1	8.55	12.25	0.025	0.025	0.025	0.025
MW-5D	02/01/1996	0.1	10.39	12.25	0.025	0.025	0.025	0.025
MW-5D	05/01/1996	0.1	10.83	12.25	0.025	0.025	0.025	0.025
MW-5D	09/01/1996	0.135	9.97	12.25	0.025	0.06	0.025	0.025
MW-5D	12/01/1996	0.185	10.72	12.25	0.025	0.11	0.025	0.025
MW-5D	03/01/1997	0.1	11.19	12.25	0.025	0.025	0.025	0.025
MW-5D	10/01/1997	0.295	11.05	12.25	0.02	0.2	0.025	0.05
MW-5D	03/01/1998	0.29	9.17	12.25	0.05	0.19	0.025	0.025
MW-5D	03/01/1999	0.545	11.45	12.25	0.15	0.16	0.025	0.21
MW-5D	11/01/1999	0.1	9.59	12.25	0.025	0.025	0.025	0.025
MW-5D	04/01/2000	0.485	10.97	12.25	0.11	0.22	0.025	0.13
MW-5D	10/01/2000	0.085	11	12.25	0.02	0.025	0.025	0.015
MW-5S	09/01/1993	0.1	10.81	6.44	0.025	0.025	0.025	0.025
MW-5S	04/01/1995	0.1	11.14	6.11	0.025	0.025	0.025	0.025
MW-5S	10/01/1995	0.1	8.8	8.45	0.025	0.025	0.025	0.025
MW-5S	02/01/1996	0.1	9.22	8.03	0.025	0.025	0.025	0.025
MW-5S	05/01/1996	0.1	11.12	6.13	0.025	0.025	0.025	0.025
MW-5S	09/01/1996	0.1	10.31	6.94	0.025	0.025	0.025	0.025
MW-5S	12/01/1996	0.1	11.01	6.24	0.025	0.025	0.025	0.025

Appendix A: Total BHC and Water Level Data

Well ID	Date	Total BHC (ug/l)*	Depth to Water (feet bgs)	Saturated Thickness (feet)	α-BHC (ug/l)	β-BHC (ug/l)	γ-BHC (ug/l)	δ-BHC (ug/l)
MW-5S	03/01/1997	0.1	11.46	5.79	0.025	0.025	0.025	0.025
MW-5S	10/01/1997	0.1	11.32	5.93	0.025	0.025	0.025	0.025
MW-5S	03/01/1998	0.1	9.4	7.85	0.025	0.025	0.025	0.025
MW-5S	03/01/1999	0.1	11.73	5.52	0.025	0.025	0.025	0.025
MW-5S	11/01/1999	0.1	9.94	7.31	0.025	0.025	0.025	0.025
MW-5S	04/01/2000	0.1	11.28	5.97	0.025	0.025	0.025	0.025
MW-5S	10/01/2000	0.085	11.28	5.97	0.02	0.025	0.025	0.015
MW-6D	09/01/1993	0.1	9.67	12.5	0.025	0.025	0.025	0.025
MW-6D	04/01/1995	0.1	9.95	12.5	0.025	0.025	0.025	0.025
MW-6D	10/01/1995	0.1	8.03	12.5	0.025	0.025	0.025	0.025
MW-6D	02/01/1996	0.1	9.05	12.5	0.025	0.025	0.025	0.025
MW-6D	05/01/1996	0.1	9.86	12.5	0.025	0.025	0.025	0.025
MW-6D	09/01/1996	0.1	9.18	12.5	0.025	0.025	0.025	0.025
MW-6D	12/01/1996	0.1	9.85	12.5	0.025	0.025	0.025	0.025
MW-6D	03/01/1997	0.1	10.25	12.5	0.025	0.025	0.025	0.025
MW-6D	10/01/1997	0.1	10.17	12.5	0.025	0.025	0.025	0.025
MW-6D	03/01/1998	0.1	8.76	12.5	0.025	0.025	0.025	0.025
MW-6D	03/01/1999	0.1	10.6	12.5	0.025	0.025	0.025	0.025
MW-6D	04/01/2000	0.185	10.28	12.5	0.11	0.025	0.025	0.025
MW-6D	10/01/2000	0.085	10.32	12.5	0.02	0.025	0.025	0.015
MW-6S	09/01/1993	0.1	9.81	7.69	0.025	0.025	0.025	0.025
MW-6S	04/01/1995	0.1	9.1	8.4	0.025	0.025	0.025	0.025
MW-6S	10/01/1995	0.1	6.82	10.68	0.025	0.025	0.025	0.025
MW-6S	02/01/1996	0.1	8.99	8.51	0.025	0.025	0.025	0.025
MW-6S	05/01/1996	0.1	9.77	7.73	0.025	0.025	0.025	0.025
MW-6S	09/01/1996	0.1	9.28	8.22	0.025	0.025	0.025	0.025
MW-6S	12/01/1996	0.1	9.92	7.58	0.025	0.025	0.025	0.025
MW-6S	03/01/1997	0.1	10.26	7.24	0.025	0.025	0.025	0.025
MW-6S	10/01/1997	0.1	10.22	7.28	0.025	0.025	0.025	0.025
MW-6S	03/01/1998	0.1	8.97	8.53	0.025	0.025	0.025	0.025
MW-6S	03/01/1999	0.1	10.56	6.94	0.025	0.025	0.025	0.025
MW-6S	04/01/2000	0.1	10.33	7.17	0.025	0.025	0.025	0.025
MW-6S	10/01/2000	0.085	10.37	7.13	0.02	0.025	0.025	0.015
MW-7D	09/01/1993	0.1	6.48	12.5	0.025	0.025	0.025	0.025
MW-7D	04/01/1995	0.1	6.85	12.5	0.025	0.025	0.025	0.025
MW-7D	10/01/1995	0.1	2.8	12.5	0.025	0.025	0.025	0.025
MW-7D	02/01/1996	0.1	6.2	12.5	0.025	0.025	0.025	0.025
MW-7D	05/01/1996	0.1	6.64	12.5	0.025	0.025	0.025	0.025
MW-7D	09/01/1996	0.1	4.95	12.5	0.025	0.025	0.025	0.025
MW-7D	12/01/1996	0.1	9.1	12.5	0.025	0.025	0.025	0.025
MW-7D	03/01/1997	0.1	7.46	12.5	0.025	0.025	0.025	0.025

Appendix A: Total BHC and Water Level Data

Well ID	Date	Total BHC (ug/l)*	Depth to Water (feet bgs)	Saturated Thickness (feet)	α-BHC (ug/l)	β-BHC (ug/l)	γ-BHC (ug/l)	δ-BHC (ug/l)
MW-7D	10/01/1997	0.115	9.45	12.5	0.025	0.04	0.025	0.025
MW-7D	03/01/1998	0.1	6.85	12.5	0.025	0.025	0.025	0.025
MW-7D	03/01/1999	0.225	9.85	12.5	0.025	0.15	0.025	0.025
MW-7D	04/01/2000	0.1	9.8	12.5	0.025	0.025	0.025	0.025
MW-7S	09/01/1993	0.1	6.76	12.74	0.025	0.025	0.025	0.025
MW-7S	04/01/1995	0.125	7.24	12.26	0.025	0.05	0.025	0.025
MW-7S	10/01/1995	0.125	3.17	16.33	0.025	0.05	0.025	0.025
MW-7S	02/01/1996	0.1	6.22	13.28	0.025	0.025	0.025	0.025
MW-7S	05/01/1996	0.125	7.07	12.43	0.025	0.05	0.025	0.025
MW-7S	09/01/1996	0.125	5.22	14.28	0.025	0.05	0.025	0.025
MW-7S	12/01/1996	0.1	9.41	10.09	0.025	0.025	0.025	0.025
MW-7S	03/01/1997	0.125	7.63	11.87	0.025	0.05	0.025	0.025
MW-7S	10/01/1997	0.135	7.09	12.41	0.025	0.06	0.025	0.025
MW-7S	03/01/1998	0.1	4.77	14.73	0.025	0.025	0.025	0.025
MW-7S	03/01/1999	0.1	7.62	11.88	0.025	0.025	0.025	0.025
MW-7S	04/01/2000	0.1	7.5	12	0.025	0.025	0.025	0.025
MW-8D	09/01/1993	0.1	9.24	12.25	0.025	0.025	0.025	0.025
MW-8D	04/01/1995	0.235	9.58	12.25	0.16	0.025	0.025	0.025
MW-8D	10/01/1995	0.155	4.73	12.25	0.08	0.025	0.025	0.025
MW-8D	02/01/1996	0.1	8.99	12.25	0.025	0.025	0.025	0.025
MW-8D	05/01/1996	0.18	9.2	12.25	0.07	0.06	0.025	0.025
MW-8D	09/01/1996	0.16	6.94	12.25	0.06	0.05	0.025	0.025
MW-8D	12/01/1996	0.1	9.24	12.25	0.025	0.025	0.025	0.025
MW-8D	03/01/1997	0.1	10.2	12.25	0.025	0.025	0.025	0.025
MW-8D	10/01/1997	0.285	9.53	12.25	0.2	0.04	0.025	0.02
MW-8D	03/01/1998	0.435	6.9	12.25	0.36	0.025	0.025	0.025
MW-8D	10/01/1998	0.547	7.96	12.25	0.41	0.025	0.025	0.087
MW-8D	03/01/1999	0.395	10.28	12.25	0.19	0.08	0.025	0.1
MW-8D	11/01/1999	0.16	7.41	12.25	0.05	0.06	0.025	0.025
MW-8D	04/01/2000	0.27	10.05	12.25	0.15	0.07	0.025	0.025
MW-8D	10/01/2000	0.085	9.95	12.25	0.02	0.025	0.025	0.015
MW-8S	09/01/1993	0.865	8.26	10.99	0.14	0.61	0.025	0.09
MW-8S	04/01/1995	0.21	8.69	10.56	0.05	0.025	0.025	0.11
MW-8S	10/01/1995	0.1	3.96	15.29	0.025	0.025	0.025	0.025
MW-8S	02/01/1996	0.1	8.1	11.15	0.025	0.025	0.025	0.025
MW-8S	05/01/1996	0.125	8.3	10.95	0.025	0.025	0.025	0.05
MW-8S	09/01/1996	0.1	7.83	11.42	0.025	0.025	0.025	0.025
MW-8S	12/01/1996	0.1	8.24	11.01	0.025	0.025	0.025	0.025
MW-8S	03/01/1997	0.1	9.18	10.07	0.025	0.025	0.025	0.025
MW-8S	10/01/1997	0.12	8.65	10.6	0.03	0.04	0.03	0.02
MW-8S	03/01/1998	0.08	5.8	13.45	0.025	0.025	0.005	0.025

Appendix A: Total BHC and Water Level Data

Well ID	Date	Total BHC (ug/l)*	Depth to Water (feet bgs)	Saturated Thickness (feet)	α-BHC (ug/l)	β-BHC (ug/l)	γ-BHC (ug/l)	δ-BHC (ug/l)
MW-8S	10/01/1998	0.095	7.03	12.22	0.025	0.025	0.02	0.025
MW-8S	03/01/1999	0.16	9.26	9.99	0.02	0.025	0.025	0.09
MW-8S	11/01/1999	0.1	6.33	12.92	0.025	0.025	0.025	0.025
MW-8S	04/01/2000	0.165	9.15	10.1	0.09	0.025	0.025	0.025
MW-8S	10/01/2000	0.315	8.86	10.39	0.02	0.22	0.06	0.015
MW-9D	09/01/1993	1.005	8.72	22.28	0.25	0.32	0.025	0.41
MW-9D	04/01/1995	1.345	8.97	22.03	0.225	0.76	0.025	0.335
MW-9D	10/01/1995	2.465	5.15	25.85	0.27	1.3	0.025	0.87
MW-9D	02/01/1996	2.465	8.45	22.55	0.31	1.5	0.025	0.63
MW-9D	05/01/1996	4.895	8.6	22.4	0.57	3.1	0.025	1.2
MW-9D	09/01/1996	5.685	7.52	23.48	0.46	3.6	0.025	1.6
MW-9D	12/01/1996	5.17	8.77	22.23	0.655	3.7	0.025	0.79
MW-9D	03/01/1997	6.75	9.64	21.36	0.25	6	0.25	0.25
MW-9D	10/01/1997	4.725	8.99	22.01	0.9	3	0.025	0.8
MW-9D	03/01/1998	4.389	6.55	24.45	0.47	3.3	0.019	0.6
MW-9D	10/01/1998	5.73	7.53	23.47	1.2	3.7	0.02	0.81
MW-9D	03/01/1999	3.02	9.7	21.3	0.4	2	0.05	0.57
MW-9D	11/01/1999	3.04	7.04	23.96	0.28	2.3	0.15	0.31
MW-9D	04/01/2000	2.355	9.39	21.61	0.56	1	0.125	0.67
MW-9D	10/01/2000	1.215	9.24	21.76	0.08	0.31	0.025	0.8
MW-A	10/01/1990	0.02	11.18	8.82	0.005	0.005	0.005	0.005
MW-A	10/01/1991	0.1	10.67	9.33	0.025	0.025	0.025	0.025
MW-A	04/01/1993	0.1	11.21	8.79	0.025	0.025	0.025	0.025
MW-A	09/01/1993	0.1	11.74	8.26	0.025	0.025	0.025	0.025
MW-A	04/01/1995	0.1	12.13	7.87	0.025	0.025	0.025	0.025
MW-A	10/01/1995	0.1	9.6	10.4	0.025	0.025	0.025	0.025
MW-A	02/01/1996	0.1	11.8	8.2	0.025	0.025	0.025	0.025
MW-A	05/01/1996	0.1	11.77	8.23	0.025	0.025	0.025	0.025
MW-A	09/01/1996	0.1	11	9	0.025	0.025	0.025	0.025
MW-A	12/01/1996	0.1	12	8	0.025	0.025	0.025	0.025
MW-A	03/01/1997	0.1	12.69	7.31	0.025	0.025	0.025	0.025
MW-A	10/01/1997	0.1	12.1	7.9	0.025	0.025	0.025	0.025
MW-D	10/01/1990	0.02	7.5	12.5	0.005	0.005	0.005	0.005
MW-D	10/01/1991	0.1	6.63	13.37	0.025	0.025	0.025	0.025
MW-D	04/01/1993	0.1	8.24	11.76	0.025	0.025	0.025	0.025
MW-D	09/01/1993	0.1	8.8	11.2	0.025	0.025	0.025	0.025
MW-D	04/01/1995	0.1	9.15	10.85	0.025	0.025	0.025	0.025
MW-D	10/01/1995	0.1	6.01	13.99	0.025	0.025	0.025	0.025
MW-D	02/01/1996	0.1	8.58	11.42	0.025	0.025	0.025	0.025
MW-D	05/01/1996	0.1	8.82	11.18	0.025	0.025	0.025	0.025
MW-D	09/01/1996	0.1	7.35	12.65	0.025	0.025	0.025	0.025

Appendix A: Total BHC and Water Level Data

Well ID	Date	Total BHC (ug/l)*	Depth to Water (feet bgs)	Saturated Thickness (feet)	α-BHC (ug/l)	β-BHC (ug/l)	γ-BHC (ug/l)	δ-BHC (ug/l)
MW-D	12/01/1996	0.1	8.65	11.35	0.025	0.025	0.025	0.025
MW-D	03/01/1997	0.1	9.78	10.22	0.025	0.025	0.025	0.025
MW-D	10/01/1997	0.1	11.11	8.89	0.025	0.025	0.025	0.025
MW-D	03/01/1998	0.1	6.75	13.25	0.025	0.025	0.025	0.025
MW-D	03/01/1999	0.155	9.64	10.36	0.025	0.025	0.025	0.08
MW-D	04/01/2000	0.1	9.64	10.36	0.025	0.025	0.025	0.025
MW-E	10/01/1990	1.61	8.47	11.53	0.25	0.86	0.25	0.25
MW-E	09/01/1991	6.2		0	1	1	1	3.2
MW-E	10/01/1991	1	8	12	0.25	0.25	0.25	0.25
MW-F	10/01/1990	11.84	6	29	5.1	2.1	0.44	4.2
MW-F	10/01/1991	1.975	8.68	26.32	0.4	0.25	0.025	1.3
MW-G	10/01/1990	0.98	9.18	26.82	0.37	0.14	0.18	0.29
MW-H	10/01/1990	12.5	8.37	11.63	2.6	7.95	1.7	0.25
MW-I	10/01/1990	0.79	7.72	12.28	0.1	0.36	0.1	0.23
MW-I	09/01/1991	4		0	1	1	1	1
MW-I	10/01/1991	0.1	6.96	13.04	0.025	0.025	0.025	0.025
MW-J	10/01/1990	51.1	8.1	11.9	15	7.1	18	11
MW-J	09/01/1991	52.6		0	13	9.6	13	17
MW-J	10/01/1991	16.4	7.93	12.07	3.5	2.1	5.1	5.7
MW-K	10/01/1990	0.4	8.6	27.4	0.1	0.1	0.1	0.1
MW-K	10/01/1991	0.1	8.65	27.35	0.025	0.025	0.025	0.025
MW-L	10/01/1990	4.27	8.66	11.34	2.1	1.4	0.67	0.1
MW-L	10/01/1991	2	8.69	11.31	0.5	0.5	0.5	0.5
MW-M	10/01/1990	0.187	11.16	13.84	0.027	0.096	0.044	0.02
MW-M	09/01/1991	4		0	1	1	1	1
MW-M	10/01/1991	0.1	11.25	13.75	0.025	0.025	0.025	0.025
MW-N	10/01/1990	13.12	8.61	11.39	3.6	2.9	0.82	5.8
MW-N	10/01/1991	7.35	8.46	11.54	0.77	1.6	0.48	4.5
MW-O	10/01/1990	111	10.12	9.88	21	52	17	21
MW-P	10/01/1990	33.9	12.41	12.59	4.5	22	1.5	5.9
MW-P	10/01/1991	17.8	12.46	12.54	3.8	5.7	2.8	5.5
MW-P	04/01/1993	24.6	12.57	12.43	4.5	14	2.1	4
MW-P	09/01/1993	33.6	13.02	11.98	6.2	15	3.6	8.8
MW-P	04/01/1995	42.3	13.4	11.6	2.9	24.5	2.4	12.5
MW-P	10/01/1995	20.25	11.24	13.76	2.3	11	2.35	4.6
MW-P	02/01/1996	16.8	13.3	11.7	1.1	11	1.3	3.4
MW-P	05/01/1996	50	13.27	11.73	4.85	30	4.95	10.2
MW-P	09/01/1996	18.15	12.63	12.37	1.7	11	2	3.45
MW-P	12/01/1996	28.7	13.31	11.69	5.4	12	5.7	5.6
MW-P	03/01/1997	71	13.77	11.23	13	31	15	12

*Total BHC is the arithmetic sum of alpha-BHC, beta-BHC, delta-BHC, and gamma-BHC using one half of the reported method detection limits for analyses reported as below detection limit.